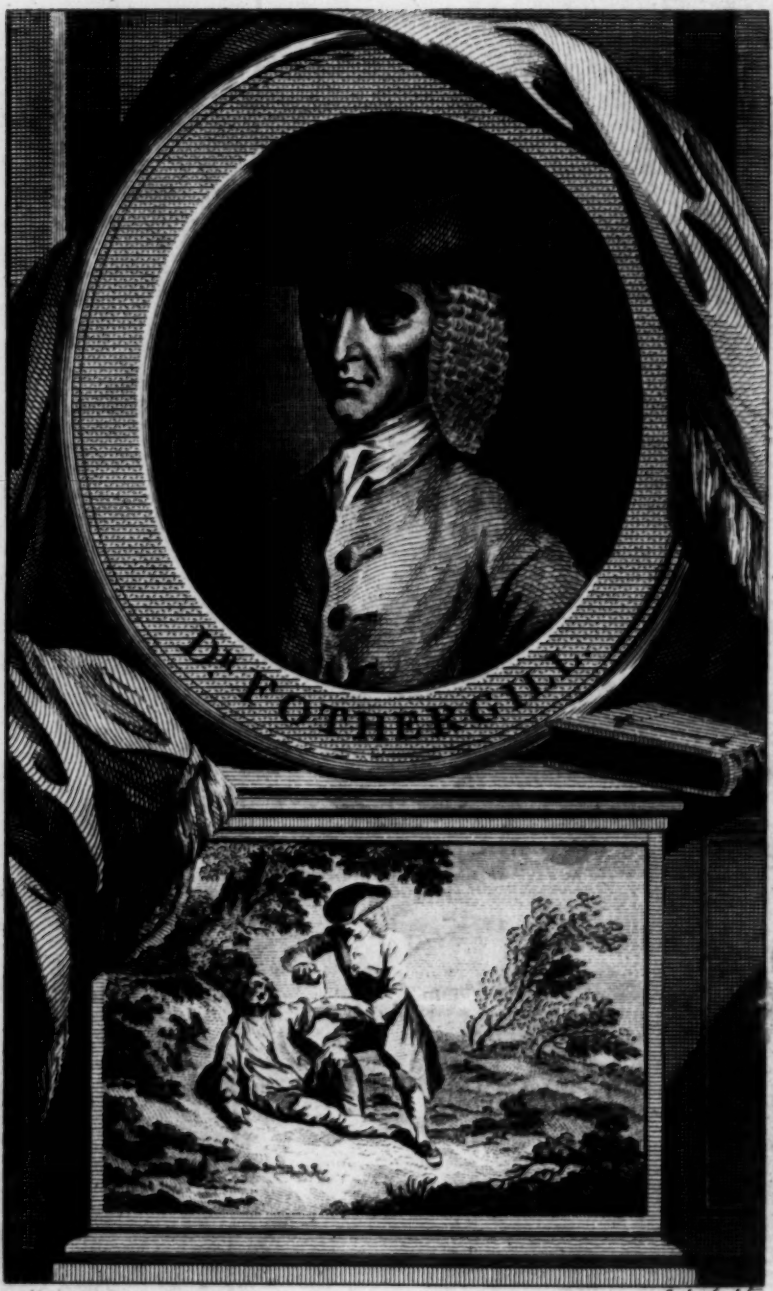
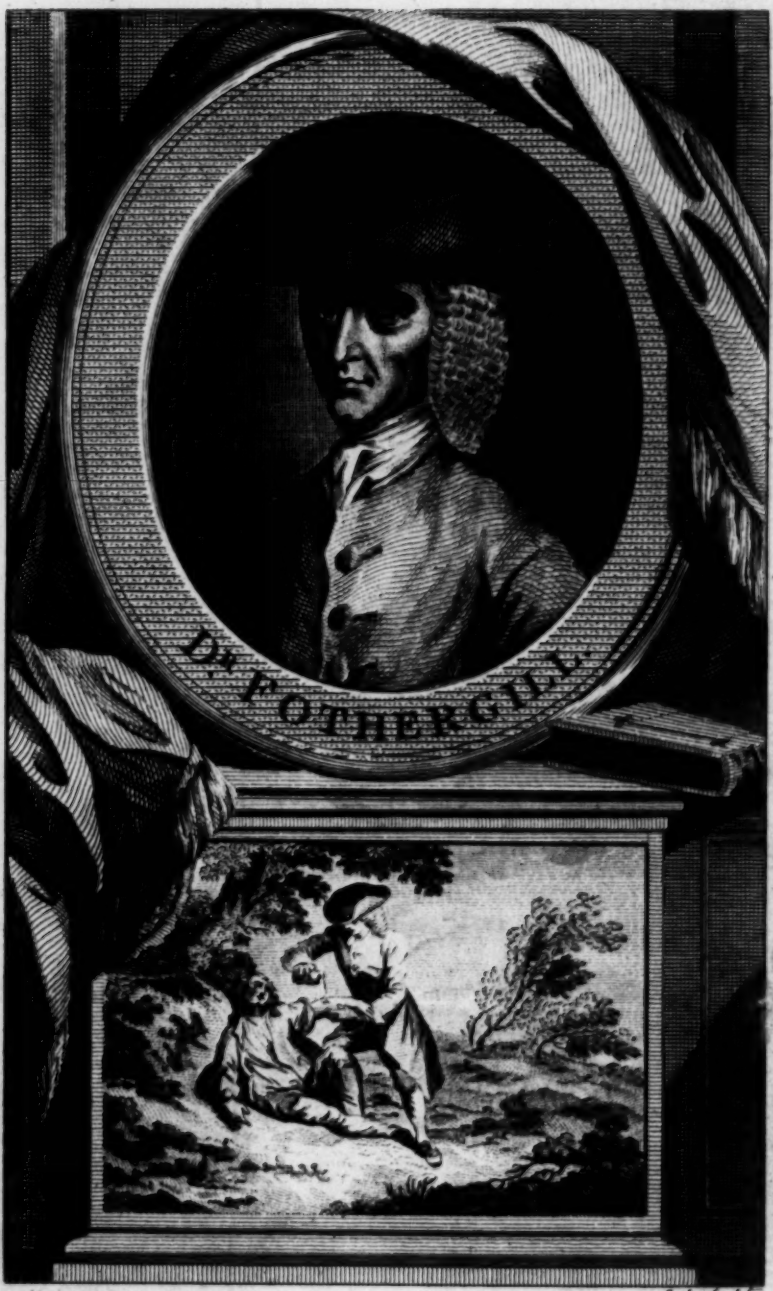


Cook. Sculp.

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A COMPLETE

COLLECTION

OF THE

MEDICAL and PHILOSOPHICAL

WORKS

OF

JOHN FOTHERGILL,

M. D. F. R. S. and S. A.

MEMBER OF THE ROYAL COLLEGES OF PHYSICIANS AT LONDON AND EDINBURGH;

OF THE ROYAL MEDICAL SOCIETY AT PARIS;

AND OF THE AMERICAN PHILOSOPHICAL SOCIETY:

WITH

An ACCOUNT of his LIFE;

AND

OCCASIONAL NOTES;

By JOHN ELLIOT, M. D.

LONDON:

Printed for JOHN WALKER, No. 20, Pater-Noster-Row.

M,DCC,LXXXI.



PREFACE.

THE writings of the late Doctor Fothergill are ſo generally and deſervedly eſteemed by medical and philoſophical readers, that, in giving a complete collection of them, I preſume I am doing an acceptable ſervice to the Public.

I have thought it right to arrange the different articles according to the order of time in which they were originally publiſhed, the two biographical papers only excepted, which will be found at the cloſe of the volume.

In copying ſuch of the author's eſſays as have been printed more than once, I have conſtantly made it a rule to have recourſe to the lateſt edition; and have taken care, in a note at the bottom of the page, to inform the reader of the time or the collection in which they firſt appeared.

The bringing together this variety of materials, however trifling it may ſeem, has been a work of no little trouble; and without the kind aſſiſtance of ſeveral Gentlemen, admirers of the author and well-wiſhers to the work, the collection, I fear, would have been incomplete. By means, however, of their liberal communications, I flatter myſelf, I have been enabled to ſend it forth perfect; by which

which I mean, that none of the author's publications on medical or philoſophical ſubjects are omitted.

The Gentlemen to whom my thanks are due on this occaſion, are MICHAEL COLLINSON, Esq. for the loan of the engraving of his father, and for ſeveral valuable communications; JAMES HORSFALL, Eſq; F.R.S. to whom I am obliged for the papers on the *Origin of Amber*, the *Manna Perſicum*, and *Account of ſome Obſervations made in Sibiria*, which I ſhould perhaps otherwiſe have omitted, as the volumes of the Philoſophical Tranſactions in which thoſe eſſays firſt appeared, are now extremely ſcarce; and Mr. JOHN NICHOLS, for the *Account of Dr. Alexander Ruſſell*, which, from the circumſtance

of

of its never having been publiſhed, was difficult to be procured.

I cannot conclude this liſt of my obligations, without expreſſing my grateful thanks to the learned and ingenious Doctor SIMMONS, F.R.S. for the uſe of his library upon this and every other occaſion, as well as for his friendly and judicious hints relative to the arrangement, &c. of the preſent work, all of which I have gladly adopted. The Doctor was likewiſe ſo kind as to point out to me ſome *errata* in Smellie's edition of our Author's Theſis, which I have taken care to correct in the preſent impreſſion.

I have now only to add, that I have anxiouſly endeavoured to do ample

ample juſtice to my author, both in giving an accurate, and I hope not an inelegant, edition of his valuable writings; and in compiling the anecdotes of his life. Under the latter head, I have availed myſelf of the beſt materials I could procure, after a diligent inquiry among ſeveral perſons who had good opportunities of being informed on the ſubject. If any inaccuracies ſhould inadvertently have crept into the account, I ſhall be very ready to rectify them in a future edition. Any information on this ſubject left for me at my houſe, or at the Publiſher's, will be gratefully acknowledged, as I wiſh to render the biography of ſo illuſtrious a character as complete as poſſible.

Carnaby-Market,
June 20, 1781.

J. E.

Lately publiſhed,

By JOHN ELLIOT, M.D.

I. PHILOSOPHICAL OBSERVATIONS on the SENSES of VISION and HEARING; to which are added, A TREATISE on HARMONICAL SOUNDS, and an ESSAY on COMBUSTION. 8vo. price 3s. 6d. ſewed.

II. ESSAYS on PHYSIOLOGICAL SUBJECTS. 8vo. price 1s. 6d. ſewed.

The following Work alſo, by the ſame Author, is in the Preſs, and will ſpeedily be publiſhed in 8vo.

ELEMENTS of the BRANCHES of NATURAL PHILOSOPHY connected with PHYSIC.

THE LIFE OF THE AUTHOR.

DR. JOHN FOTHERGILL was born in the year 1712, in the neighbourhood of Richmond in Yorkſhire. His father, who profeſſed the principles of Quakeriſm, and who from an anecdote * related of him would ſeem to have been a man of ſome weight with his Brethren, followed the buſineſs of a Brewer, and had ſeveral children. The eldeſt ſon, who died a few years

* The anecdote alluded to is introduced in the account of our Author printed in the Weſtminſter Magazine, and is as follows: "In the year 1734 one John Fothergill, probably "the Doctor's Father, and Joſeph Storr, took a very active "part in the conteſted Election for the County of York, and "ſigned a circular Letter to the Quakers, lamenting that ſome "of them had voted *inconſiſtent with unity and good report*, "and recommending to their favour Sir Rowland Winn and "Cholmondley Turner, two of the Candidates."

before our Author, diſtinguiſhed himſelf as a preacher among the Quakers. John, the ſubject of our preſent inquiry, was educated at the ſeminary belonging to thoſe of his profeſſion, and at a proper age put apprentice to one Mr. Barclay, an Apothecary, then reſiding at Bradford, who afterwards removed to London, and lived at the corner of Featherſtone-Buildings. With this Gentleman he continued during the term of his indentures; at the end of which he went to Edinburgh, where he took the degree of Doctor of Phyſic, in the year 1736. His inaugural Theſis was entitled, "De Emeticorum Uſu in variis Morbis tractandis," 4to. and has lately been republiſhed in a Collection of Theſes, in two volumes, by Smellie.

From Edinburgh he paſſed over to Leyden, where he made only a ſhort ſtay; and after viſiting Aix-la-Chapelle, and the Spa, returned to England.

Having qualified himſelf for the practice of his profeſſion, he came to town, about the year 1740; and took a houſe in White-hart Court, Lombard Street, where he continued during the greater part of his life; and where he acquired and eſtabliſhed both his fame and fortune. It has been ſuppoſed that he owed his ſucceſs in a great meaſure to the novelty of his character; but the fact is, that at that time there were two other phyſicians of the

ſame religious perſuaſion as himſelf; a peculiar addreſs and ſuperior talents were no doubt the cauſes to which he owed his ſuperiority. At his firſt arrival in London, and for ſome time after, his finances would not allow him to keep a carriage; he was therefore obliged to attend his patients on foot.

In the year 1744, he was admitted a Licentiate of the College of Phyſicians, at London; and about the ſame time elected a Fellow of the Royal Society. In the year 1748, he publiſhed his pamphlet called "An Account of the Sore Throat attended with Ulcers." To this piece, which is entitled to great praiſe, and has been tranſlated into almoſt every European language, he owed a conſiderable extenſion of his practice. The malady of which it treated was at that time extremely fatal in this kingdom, particularly in London; and the Phyſicians of this country, conſidering it as a new diſeaſe, differed greatly as to their method of treating it. It is now pretty generally acknowledged, that the late Dr. Leatherland was the firſt who happily ſuggeſted the proper mode of cure. The late Mr. Chandler, F. R. S. in his Treatiſe on a Cold, has given a very circumſtantial account of this matter, which, as it cannot but be intereſting to the medical reader, we ſhall relate in his own words:

" In January, 1740, upon the unexpected death " of a child under my care, carried off by this " diſeaſe, (i. e. the putrid ſore throat) and that " within a few hours after ſuch favourable ap- " pearances as ſeemed to promiſe a recovery; and " upon its ſeizing another in the ſame family, im- " mediately afterwards; I made my requeſt to the " parents, for leave to call in ſome able Phyſician " to it; repeating to them what I had before de- " clared, that I was utterly at a loſs how to ac- " count for the death of the firſt; and that there " was ſomething in the whole of the caſe quite " new and unknown to me. The perſon fixed on " to both our ſatisfactions was Dr. Leatherland. " This very learned and ſagacious Phyſician, upon " the narrative I gave him of all that had paſſed " in the firſt child's caſe, and of the manner in " which the ſecond was ſeized, immediately pre- " ſaged a like fatal event to this laſt as had hap- " pened to the former; which preſage proved a " true one in every circumſtance foretold. The " Doctor, as he then told me, on the occaſion of " the illneſs and death of the two ſons of the late " Right Honourable Henry Pelham, which fell out " in the latter end of the preceding year, 1739; " and of the alarm it cauſed over all this great " City, both from its novelty and fatality; had " been employing his care and pains in turning " over ancient and modern writers to ſee if he

" could

" could trace out any footſteps of this remarkable " and terrible diſeaſe; and after long ſearch had " been ſo happy as to diſcover the identical diſ- " eaſe circumſtantially deſcribed in the Spaniſh " writers: *And from all I know, or have ever heard,* " *I believe it to be a matter out of queſtion, that it is* " *to Dr. Leatherland we are indebted for this diſco-* " *very, and for the knowledge of the true method in* " *which it ought to be treated.**"

Should it appear ſtrange that no notice was taken by Dr. Fothergill of the Gentleman to whom he was indebted for the ground-work of his Treatiſe, it is neceſſary in point of juſtice to obſerve, that the Pamphlet being ſhewn to Dr. Leatherland before its publication, he deſired all mention of him might be omitted, as he had not quite ſatisfied himſelf concerning the proper mode of curing the diſorder. But in the later editions of the work, after the death of Dr. Leatherland, our Author acknowledges his obligations to that reſpectable Phyſician.

The uniformity of a profeſſional life is ſeldom interrupted; it therefore furniſhes few particulars worthy of being recorded. The tranſactions of one day ſeldom differ from thoſe of another. In Dr. Fothergill's caſe, perhaps, there was as little

* Chandler's Treatiſe of the Diſeaſe called " A Cold." 8vo. 1761. p. 55.

variety as ever fell to the ſhare of any one man. His popularity continued undiminiſhed as long as his health and ſtrength would allow him to attend on his patients, and during a long ſeries of years his diligence was unabated. In this period he acquired great wealth, part of which he employed in gratifying his taſte for VIRTU; ſome to the encouragement and promotion of Letters *; and much to the relief of the indigent and deſerving.

The following anecdote, related of him by a Gentleman to whom he was well known, reflects too much honour on him to be omitted.—A friend of his, a man of a worthy character, who has at

* Among other perſons patronized by Dr. Fothergill was Anthony Purver, originally an unlearned Quaker mechanic, who had been brought up a ſhoemaker, with no other education than a very ſlender and imperfect knowledge of his native tongue. Being of a ſerious turn of mind, he reſolved to examine the religious ſentiments and principles which he had imbibed in his youth, and in the courſe of his enquiries found himſelf much embarraſſed by the different tranſlations and explanations of ſcripture. This determined him, though late in life, to ſtudy the original languages. He began with Hebrew, and in a very moderate compaſs of time made himſelf competent maſter of that and other oriental languages which are moſt uſeful to a critical knowledge of the ſcriptures. He afterwards learned Greek, and at laſt Latin. His progreſs in theſe affords a ſtriking inſtance of the power of application, and how far a determined reſolution may carry a man of common underſtanding in literary improvements. The fruits of Mr. Purver's ſtudies were a new and literal tranſlation of all the books of the Old and New Teſtament, with notes critical and explanatory, in 2 vols. folio, printed in the year 1765, entirely at the expence of Dr. Fothergill.

this time an income of about one hundred pounds a-year church preferment, was, in the earlier part of his life, ſeated in London upon a curacy of fifty pounds per annum, with a wife and a numerous family. An epidemical diſeaſe, which was at that time prevalent, ſeized upon his wife and five of his children: in this ſcene of diſtreſs he looked up to the Doctor for his aſſiſtance, but dared not apply to him, from a conſciouſneſs of his being unable to reward him for his attendance. A friend, who knew his ſituation, kindly offered to accompany him to the Doctor, and give him his fee. They took the advantage of his hour of audience, and after a deſcription of the ſeveral caſes, the fee was offered, and rejected; but a note was taken of his place of reſidence. The Doctor called aſſiduouſly the next and every ſucceeding day, till his attendance was no longer neceſſary. The Curate, anxious to return ſome grateful mark of the ſenſe he entertained of his ſervices, ſtrained every nerve to accompliſh it; but his aſtoniſhment was not to be deſcribed, when, inſtead of receiving the money he offered, with apologies for his ſituation, the Doctor put ten guineas into his hand, deſiring him to apply to him without diffidence in future difficulties.

In 1754, he was choſen Fellow of the Royal College of Phyſicians at Edinburgh, to which he

was a conſiderable benefactor. He was likewiſe one of the earlieſt members of the American Philoſophical Society inſtituted at Philadelphia; and in 1776, when a Medical Society was founded at Paris, by the King of France, our Author was one of a ſelect number of foreign Phyſicians whom the Society thought proper to honour with their Diploma.

In the conteſt between the Fellows and Licentiates of the College of Phyſicians, Dr. Fothergill took an active part, and ſubſcribed five hundred pounds towards bringing it to a legal deciſion. When all thoughts of law proceedings were laid aſide, the Licentiates continued to aſſemble once a month for the ſake of reading medical papers, and converſing on the prevailing diſeaſes, and other ſubjects of their profeſſion. Upon the death of Sir William Duncan, Bart. our Author was unanimouſly elected to be their Preſident, and he continued in this office till his death. He was ſeldom abſent from their meetings; and his uniform endeavours to render this inſtitution a ſource of profeſſional harmony, and at the ſame time of public utility, raiſed him high in the eſteem of every member.

Ever anxious to promote the intereſts of his profeſſion by extending our knowledge of diſeaſes,

caſes, he united himſelf with a ſelect number of ingenious Phyſicians, for the moſt part men of extenſive public or private practice, in collecting materials for a work of which five volumes have appeared under the title of *Medical Obſervations and Inquiries*, a performance known and eſteemed in every country where medical ſcience is ſucceſsfully cultivated. By the contents of the preſent volume the reader will perceive how largely our Author contributed to that excellent collection.

A man of his diſtinguiſhed abilities and mild diſpoſition could not fail to acquire the eſteem of his peaceful brethren, the Quakers; and accordingly he was for many years looked up to as one of their moſt valuable members, and was frequently appointed by the Meeting to which he belonged, to draw up and ſign the annual letter* to the Friends at their general aſſembly at Whitſuntide. He likewiſe drew up and preſented the congratulatory addreſs of the Quakers to his preſent Majeſty on his acceſſion to the throne, which he managed very ingeniouſly, avoiding the peculiarities of ſpeech to which thoſe of his ſect are ſo much addicted.

* The laſt letter which he wrote on an occaſion of this ſort, drew upon him a ſevere attack from a Writer in the Gentleman's Magazine.

To paſs through life perfectly free from cenſure is the lot of few. Perhaps no man ever deſerved it leſs than Dr. Fothergill; but an unfortunate diſpute with a perſon of his own religious perſuaſion expoſed him to the ill-natured reflexions of many of his own ſect, as well as of the public at large. We ſhall eaſily make it appear, that this obloquy was perfectly unmerited on the ſide of our Author. The circumſtances alluded to were as follows: In the year 1766, one Samuel Leeds, an illiterate perſon, who had been brought up to the trade of a bruſh-maker, was admitted by the Univerſity of Edinburgh to the degree of Doctor of Phyſic; and on his coming to London ſoon afterwards, being eſpouſed by ſeveral leading perſons amongſt the Quakers, was choſen Phyſician to the London Hoſpital. Soon after his election, one of his colleagues, in a converſation with Dr. Fothergill, happening to mention Leeds's ſucceſs, the Doctor replied, "Take care he does no miſchief." It was not long before Leeds gave ſufficient marks of his ignorance to alarm the Governors; and what had dropped from ſo reſpectable a perſon as Dr. Fothergill might perhaps not a little tend to convince them of their precipitancy in electing a Phyſician to their Hoſpital ſo unqualified for the duties of it. They therefore made a reſolution, "that no Phyſician ſhould continue to officiate in "that Hoſpital who had not paſſed an examination

"at

"at the College of Phyſicians." Dr. Leeds now ſaw himſelf reduced to the neceſſity of either reſigning his poſt in the Hoſpital, or of preſenting himſelf to the College. He determined to adopt the latter alternative, was examined, and rejected. The Cenſors with great candour had adviſed him to poſtpone his examination another year, if he thought himſelf not ſufficiently prepared; but he would not liſten to their advice. The expreſſion that had eſcaped our Author, with regard to this unfortunate perſon, having come to his knowledge, he made it the foundation of an accuſation which was brought before his own Society. Theſe inoffenſive people, who are averſe to the litigious proceedings that vex and ruin ſo many of their fellow-citizens, referred the charge, after their uſual manner, to a certain number of arbitrators. Five perſons were appointed for this purpoſe, and three of the number awarded £.500 damages to Dr. Leeds, after refuſing to hear Dr. Fothergill's principal evidence. The two other arbitrators with great propriety proteſted againſt the award; and after much altercation in the Society, Dr. Leeds moved the Court of King's Bench to ſhew cauſe why the rule for the recovery of the damages ſhould not be made abſolute. Lord Mansfield, after hearing the Evidence and Counſel on the part of Dr. Leeds, refuſed to hear Dr. Fothergill's Counſel; becauſe, he obſerved, the Evidence

dence on the part of Dr. Leeds's arbitrators was ſufficient to prove the illegality and injuſtice of their own award: the learned and noble Judge further added, that Dr. Fothergill did no more than his duty, in ſaying what he was charged with; and that he would not have acted as an honeſt man, had he ſaid leſs. This he illuſtrated by a facetious ſtory, in which he had himſelf acted a ſimilar part with a diſcarded ſervant.

After this diſgraceful tranſaction, Dr. Leeds, for ſome little time, kept an apothecary's ſhop in Biſhopſgate-ſtreet, and from thence retired to Ipſwich, where he died about the year 1773.

So far was our Author from poſſeſſing a jealouſy at the appearance of a rival in phyſic amongſt thoſe of his own religious perſuaſion, that Dr. Chorley, a Quaker Phyſician, was admitted into his own houſe, and reſided in it during Dr. Fothergill's retreats to Lea-Hall; and at length, after being introduced into conſiderable practice, died under the roof of his Patron. It might, indeed, truly be ſaid of Dr. Fothergill, that he was a liberal promoter of merit, without any regard to the religious tenets of its poſſeſſor.

As Dr. Fothergill advanced in years, he began to wiſh for ſome relief from the laborious attend-

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ance which he had been uſed to give his patients; and with that view he quitted his houſe in the City, and reſided in Harpur-ſtreet, Red-Lion-Square. He alſo furniſhed himſelf with a pleaſant retreat at Upton, which he uſed to viſit on Saturday during the winter, ſometimes more frequently in ſpring and ſummer. For ſeveral years before his death, he was accuſtomed to retire to Cheſhire, in the month of July, to Lea-Hall, a pleaſant eſtate in the neighbourhood of Middlewich, which he rented of Sir John Leiceſter. He never had a leaſe of this houſe, yet he expended a conſiderable ſum of money in repairing and embelliſhing it, and the grounds belonging to it. He generally remained at this place till the latter end of September. During his reſidence here, he took no fees, but uſed to go once a-week to an inn at Middlewich, and preſcribe gratis to all who applied to him. In this retreat, he uſed to enjoy the company of a ſmall number of friends, ride every day on horſeback, and write a great number of letters to his correſpondents. He had very early acquired a taſte for Natural Hiſtory, which he acknowledged to have been much heightened and improved by his friend Peter Collinſon. In proportion as the profits of his practice encreaſed, he indulged this taſte. His garden, at Upton, was very juſtly reckoned one of the firſt botanic gardens in Europe. Every plant that ſeemed likely

likely to be of uſe in phyſic, or manufactures, was procured at any expence, and cultivated with the greateſt attention. He had correſpondents in every part of the world, who were continually furniſhing him with new ſpeciments of plants, ſhells, and inſects. He was at great pains to procure accounts of the *Cortex Winteranus*, and of the tree that produces the *Terra Japonica* *.

* The former of theſe is reprinted in the preſent Collection; the latter, which was written by Mr. James Kerr, and publiſhed in the *Med. Obſ. and Inq.* vol. v. is prefaced by the following Addreſs from our Author to the Medical Society:

"GENTLEMEN,

"YOU will excuſe me I hope for introducing to your notice, an exact deſcription of the tree that produces the extract called *Terra Japonica*. Hitherto it has rather been gueſſed at than known, from whence this ſubſtance derives its origin; the beſt of our writers on the *Materia Medica* have given us very little of certainty concerning it.

"The figure here exhibited is copied from a drawing taken on the ſpot, compared with a good ſpecimen tranſmitted with it, of the leaves, flowers, pods, and ſeeds. The ſeveral parts of the flower have been examined by the microſcope, and delineated with great accuracy: and every doubt concerning the origin of this ſubſtance will hereby be removed. It will give you ſome ſatisfaction to know, that ſome of the ſeeds have vegetated; and that perhaps we may be able to propagate the plant, ſo far as to ſend it to our Weſt India Iſlands, where it will probably flouriſh, and yield us, by the labour of our own people, an Extract in greater perfection than can be expected from a proceſs attended with ſo little care in the Eaſt Indies. If I have treſpaſſed too much on your plan, by introducing ſo many articles of Natural Hiſtory, I muſt intreat your indulgence for the preſent. It ſeems to be doing ſome benefit to ſcience, to remove ambiguity, and prevent all poſſible miſtake.

Among other ſervices which Dr. Fothergill rendered the Public, one of the moſt important to the preſent as well as to future times, was the eſtabliſhment of the Seminary at Ackworth, in Yorkſhire, of which he was the original projector, and to which he was a conſiderable benefactor. Dr. Hird ſays, "On his return from Cheſhire, through Yorkſhire, in the year 1778, he did me the favour of being my gueſt a few days, during which time he was viſited by many of his friends in thoſe parts. In one of theſe interviews, the converſation turned on an inſtitution at Gilderſome, a ſmall eſtabliſhment for the education of poor children amongſt the Society. The Doctor was enquiring into its ſtate and management, and how far it might ſerve as a model for a larger undertaking. A juſt deſcription being given of it, with the following remark, that not only this, but all others, however laudable the motives from which they took their riſe, muſt fail of

take. Your works, Gentlemen, paſs into the hands of many ingenious medical perſons who traverſe the moſt diſtant parts of the globe. Inſtances like theſe prompt them to obſerve; and it is from the labour of ſuch, that this part of ſcience, a perfect knowledge of the *Materia Medica*, has hitherto, and muſt ſtill derive its greateſt improvements.

"This account was drawn up by an attentive, able naturaliſt, aſſiſtant ſurgeon to the civil Hoſpital at Bengal, and tranſmitted by the learned and worthy lieutenant colonel Ironſide to

J. FOTHERGILL."

ſucceſs,

ſucceſs, without a conſtant ſuperintending care, and unremitting attention to the firſt great object of the inſtitution; this idea was exemplified by the then preſent ſtate of the Foundling Hoſpital at Ackworth, which, although originating from the moſt humane principle, and erected at a vaſt expence, was, from repeated inattentions to the firſt deſign, in danger of dilapidation, and ready for public ſale." The relation ſtruck the Doctor forcibly. "Why may not this, ſaid he, ſerve the very purpoſe I am in purſuit of?" To be ſhort, the building and an eſtate of thirty acres of land were purchaſed, improved, and furniſhed by ſubſcription.—The Doctor ſet a generous example by his own contribution, and an endowment by his will in perpetuity.

Thoſe who have been moſt ſucceſsful in imparting health to others, are not always equally fortunate in their applications to themſelves. The temperance and regularity of Dr. Fothergill might ſeem to promiſe a long life, free from the miſeries of diſeaſe. He had not, however, that happineſs. About two years before his death, he had been afflicted with a diſorder which he apprehended, though without foundation, to be an irregular gout. It terminated in a ſuppreſſion of urine, from which he obtained a temporary relief; but it returned

returned again with greater violence, and, notwithſtanding every effort of the Medical Gentlemen who attended him *, put a period to his exiſtence on the 26th day of December 1780, in the 69th year of his age. On diſſection, the diſeaſe appeared to have been occaſioned by a ſchirrous enlargement of the proſtate, which compreſſed the neck of the bladder ſo as to prevent the introduction of a catheter. His remains were, on the 5th of January following, depoſited in the burial-ground at Winchmore-Hill, being attended by more than ſeventy coaches and poſt-chaiſes filled with Friends, who ſeized this laſt occaſion to pay a tribute of reſpect to the memory of the deceaſed.

Dying a batchelor, he deviſed the bulk of his fortune to a maiden ſiſter, who reſided with him for many years before his death. He likewiſe bequeathed handſome legacies to his other relations and friends. His library, which conſiſted of an excellent collection of books in Phyſic and Natural Hiſtory, particularly the latter, has lately been ſold by auction; and Dr. Hunter has purchaſed his collection of ſhells and corals of his executors for 1200l.; our Author, by his will,

* Dr. Warren, Dr. Watſon, Dr. Reynolds, and Mr. Pott.

having given directions that it ſhould be appraiſed after his death, and that Dr. Hunter ſhould have the refuſal of it at five hundred pounds under the valuation.

The perſon of Dr. Fothergill (ſays Dr. Hird) was of a delicate, rather of an extenuated make. His features were all character. His eye had a peculiar brilliancy of expreſſion; yet it was not eaſy ſo to mark the leading trait, as to diſengage it from the united whole. He was remarkably active and alert, and, with a few exceptions, enjoyed a general good ſtate of health.

His dreſs was remarkably neat, plain, and decent, peculiarly becoming himſelf; a perfect tranſcript of the order, and, I may add, of the neatneſs of his mind. He thought it unworthy a man of ſenſe, and inconſiſtent with his character, to ſuffer himſelf to be led by the whim of faſhion, and become the ſlave of its caprices.

At his meals he was remarkably temperate; in the opinion of ſome, rather too abſtemious, eating ſparingly, but with a good reliſh, and rarely exceeding two glaſſes of wine at dinner or ſupper; yet, by this uniform and ſteady temperance, he preſerved

preſerved his mind vigorous and active, and his conſtitution equal to all his engagements.

The character of Dr. Fothergill will receive no injury, conſidered either as a profeſſional man or a member of ſociety, if compared with any perſon of the preſent age. In the former capacity, he was learned, careful, and aſſiduous; in the latter, humane, benevolent, and attentive to the wants and miſeries of mankind. In the exerciſe of the duties of his calling, he ſpent almoſt the whole of his life; and had very little time to devote to pleaſure or amuſements, had he poſſeſſed any inclination for ſuch relaxations. He had, however, a conſiderable propenſity to Natural Hiſtory, and ſpared no expence to obtain whatever was ſcarce, curious, or valuable in thoſe purſuits to which he had turned his attention. But, tho' devoted to buſineſs, to ſcience, and to literature, he was not negligent to the political ſyſtem of his country, and entertained ſentiments of Liberty and the Britiſh conſtitution which did honour to him as an Engliſhman. He ſincerely felt for the diſtreſſes of thoſe who were involved in the calamities ariſing from the preſent unnatural war; and is ſaid to have contributed very liberally to the relief of many of the unfortunate ſufferers. Where ſo many good qualities reſided, it would be invidious to point

out trifling, inoffenſive foibles. Some ſuch fell to the ſhare of our Author. They were, however, more than compenſated by his virtues; and the Public, as well as his friends, hath ſuſtained, by his death, an irreparable loſs.

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DISSERTATIO MEDICA INAUGURALIS,

DE

Emeticorum Uſu in variis Morbis tractandis.

QUAM,

FAVENTE SUMMO NUMINE,

Ex Auctoritate Ampliſſimi SENATUS ACADEMICI,

Et nobiliſſimae FACULTATIS MEDICÆ decreto,

PRO GRADU DOCTORATUS,

SUMMISQUE IN MEDICINA HONORIBUS ET PRIVILEGIIS RITE AC LEGITIME CONSEQUENDIS;

Eruditorum examini ſubjicit

JOANNES FOTHERGILL,

ANGLO-BRITANNUS.

Ad diem 13. Auguſti, hora locoque ſolitis.

EDINBURGI*.

M, DCC, XXXVI.

* The Edinburgh Edition of this Inaugural Diſſertation was in Quarto. It has ſince been republiſhed by SMELLIE, in his THESAURUS MEDICUS, Vol. I.

Viris praeclaris,

Praeceptoribus ſuis plurimum colendis,

JOANNI RUTHERFORD,

Med. Doct. atque in Academia Edinburgenſi
Medicinae theoreticae et practicae
Profeſſori :

ANDREÆ ST. CLAIR,

Med. Regio,
Medicinae theoreticae et practicae in eadem Academia
Profeſſori ;

ANDREÆ PLUMMER,

Med. Doct. atque ibidem Medicinae et Chemiae
Profeſſori :

ALEXANDRO MONRO, R. S. S.

Et in eodem Lyceo Anatomiae et Chirurgiae
Profeſſori :

Nec non

CAROLO ALSTON,

Med. Doct. et Reg. Botanices
Profeſſori :

Ob plurima in ſe collata beneficia,

Hoc ſpecimen inaugurale,

Quod exegit mos laudandus Academiae,

Omni quo par eſt obſequio et exiſtimatione offert

JOANNES FOTHERGILL.

DISSERTATIO MEDICA INAUGURALIS, DE

Emeticorum Uſu in variis Morbis tractandis.

PROEMIUM.

QUUM corporis vigor, mentis acumen, ſalus perfecta praeſens, futurae ſtabilimen, vitae conſtantis et integrae dulcedo, magna ex parte ventriculi, viſceris praenobilis, fata ſequantur; nihil arduum aut moleſtum ducebant tum veteres tum recentiores medici, quo minus in vado eſſet tantae utilitatis negotium. Experientia gnari facti fuerunt, ſi ſoſpes eſſet ventriculus, minus metuendum eſſe reliquis; eo autem male ſe gerente, incolumem diu haerere totius corporis fabricam non poſſe. Indies quoque compertum eſt, quod arthritis, hydrops, ſcor-

butus, tabes, inſania, febreſque peſſimae (et ſi quae graviora mala ſuperſint, et hominibus infenſa magis), rarius attollunt capita, illaeſo interim ventriculo: Et ſi forte naſcantur aliunde, ſaeviunt eo magis, quo magis a ſanitate recedit princeps haec animalis officina. Hinc itaque liquet, quantum naturae miniſtris incumbit, ejus incolumitati enixe proſpicere. Ipſius autem ventriculi, ejuſque contentorum vitia, tum et morbi exinde nati, quorum fibrae altius haerent, opem ſaepe poſcunt, quae depletione tentatur; neque ad culpam horum delendam, prognataſque labes eradicandas, felicius adhibetur ſaepiſſime remedium, quam evacuatio per vomitum facta. Hac unica intentione adeo celebrata fuit emeſis apud veteres medicinae patronos; ut etiam ſanis, ſi ſani perſtare voluiſſent, hoc medicinae genus praeſcripſerit * Hippocrates, quod ſaepius repetendum ſuaſit, licet aſpera et intractabilia admodum eſſent medicamenta vomitoria veteribus familiaria; nec certe ſine decumbentium faſtidio, vel medicorum ſollicitudine, porrigenda.

* Hippocrates de diaeta, lib. 3. et alibi paſſim.

PARS

PARS PRIMA.

1. Eſt autem vomitus ea ventriculi, diaphragmatis, et muſculorum abdominalium actio, qua illius contenta, quaſi inter praela compreſſa, vi magna ſurſum per os rejiciuntur. Horum ſiquidem viſcerum contractione ſurſum urgentur omnia in abdomine contenta viſcera, conſtringitur inde pylorus, dum quae in ventriculo haeret materies, illius * et ambientium vi muſculari in orificium ejus ſuperius impreſſa, illud dilatat, et per contractas oeſophagi fibras longitudinales facilem ſibi parat exitum.

2. Stimulus quicunque validus, ventriculo inditus, ejuſque nervis applicatus, actionem hanc incitare poteſt, ob commercium quod obtinent ventriculi nervi cum eis, qui muſculis abdominalibus et diaphragmati inſerviunt.

3. Copia etiam ingeſtorum nimia atque moles, licet haud alio, ſaltem parum ingrato

* Wepfer de cicuta aquatica, cap. 15. hiſt. 1.

potiantur aculeo, nauſeam, deinde vomitum excitare queunt; cujuſmodi ſunt, aqua egelida, aromatibus imbuta, ſuaviaque, nec non dapes illae quae guſtui ſummopere blandiuntur, avide et ſine norma deglutitae; quicquid porro nervos ventriculi irritat, aliave aliqua ratione aequabilem horum liquidi fluxum perturbat admodum, vomitionem ciet; qualia ſunt capitis contuſio vel concuſſio vehemens, jactatio in nave vel rheda inaſſuetis, valida imaginatio, ſive rei cujuſdam injucundae memoria; haec enim aliaque ſimilia delicatulos ſummo urgent quandoque faſtidio vomituque.

4. Attamen compertum eſt, objecta omnia, ſtimulo licet praedita, haud aeque certo vires ſuas in ventriculum vicinaque exerere, ſed nunc per unum ex emunctoriis, nunc per alterum, promovere ſeceſſum: Quaedam itaque quae fere perpetuo vomitum producere conſtabat, quaeque prae caeteris huic muneri obeundo maxime accommodata eſſe docebat experientia, in unicum hunc uſum ſepoſuit vetuſtas. Ἐμετικα haec appellabant Graeci, VOMITORIA Latinis audiunt.

5. Man-

5. Mancus vero fuit horum apud veteres catalogus, licet amplus; pauca enim vomitoria cognita habuerunt, quae non acerba admodum et inclementia, vel lenia prorſus et invalida, comperiuntur; ſi modo ſimplicia eadem, eiſdem inſignita titulis, apud nos hodie proſtant, ac apud iſtos olim: Uti cuique patebit, antiquorum ſcripta evolventi. Veratrum aliquando lethale fuit, infida quoque aliorum actio. Non mirum itaque, ſi morbo graviore torqueri, vel ad aliud quodcunque ſubſidii genus confugere maluerint aegroti, quam durum et immite, vel lenius, at incertum, ſaepe infructuoſum, experiri medicamen: Quo contigit ut abſterritus quandoque aeger, medicum abhorreret; medicus pariter medelam, quae tanta pollicita eſt, propinare dubitaret: Unde uterque incommodum haud leve ſaepius tulit. Atque licet Hippocrates rationem intellexerit temperandi emetica; alii tamen multi, minus ſolertes, ſpe ſua ſaepe exciderunt. Neque chemia, quae tot praeclara medicamenta detexit, ulla fere ſuppeditat emetica, quae tenellis et delicatioribus tuto dare licet: Quin et dolebat ſuo tempore Sydenhamus, deſide-

rari adhucdum emeticum *tutum, et ſatis interim efficax*, quale in celebri radice ipecacuanha paſſim hodie experiuntur practici. Hujus inſtituti non eſt, ſingula, quae vi emetica pollent, recenſere, horum ſaltem claſſes ratione virium indicaſſe ſufficiat.

6. In *lenia, vehementiora,* et *fortiſſima* vomitoria, diſtinguendi hunc evacuantium ordinem, mos quibuſdam obtinuit: Nec quidem inepte; diverſa enim iſta ſimplicia, quae ad vomitum ciendum hodie uſurpantur, commode ſatis ſub triplici hac ſerie diſpertiri poſſunt. Nulla tamen fides efficaciae, ſenſibus patefactae, odori ſaporive videlicet, habenda eſt: Sed experientiae ſoli horum credenda diſtributio.

7. Emetica quae *lenia* appellantur, gemini ſunt ordinis; 1*mo*, Recenſentur ea quae mole ſua, vel irritamine levi, moli unito, ſtomachum laceſſunt; qualia ſunt, aqua tepida, viſcoſa, ſaccharata, mellita, oleoſa, ſalita, jura pinguia, infuſa theae viridis, cardui benedicti, florum chamaemeli, aliaque ejuſmodi plura ex diverſis plantis aromaticis elicita. 2*do*, Huc pertinet

pertinet emetici cujuſdam fortioris doſis refracta, quae ſtimulo gaudet tam valido, ut nauſeam, vomendique conatum unum alterumve provocare poſſit, nec amplius urgeat. Ex ſalium numero haec plerumque petuntur, quae humoribus gaſtricis ſtatim ſolvuntur, et celeriter undiquaque diſperſa, applicantur nervis, mox ſurſum rejiciuntur, penituſque epotis liquidis eluuntur ſoluta, ut brevi quieſcant omnia. Filum per oeſophagum trajectum, irritatio gulae, per pennam oleo madefactam; idea faſtidiens, inaſſueta navis agitatio, currus per loca aſpera ducti conquaſſatio, animi denique pathemata leviora huic ordini conſentiunt. Noviſſime tamen memoratas cauſas quibuſdam vomitiones inducere perquam violentas haud diffiteor; pleriſque vero non item, neque eos diu et fortiter ſimul moleſtare ſolent.

8. *Fortiorum* claſſis fit ex prioribus § 7. *n.* 2*do*, aucta ſaltem doſi, vel cauſa; aut ex iis quorum firmior compages, et hinc tardior effectus, ſed vehementior: Namque emiſſae particulae vellicantes, paulatim in cryptas pli-

plicaſque ventris rugoſi ſeſe inſinuant, nervulis adhaereſcunt, moleſtiam creant, augentque, nec ingeminato vomendi niſu, velatis ſedibus excutiuntur, uſque donec eorum vires repetito opere decoquantur; hinc emeſis protractior, nec non vehementior. Medicamenta pleraque ſurſum purgantia, hodierna praxi maxime uſitata, huic claſſi addenda ſunt, uti, v. g. aſarum, ipecacuanha, radix raphani ruſticani, ſemen ſinapis, ſcilla, horumque variae praeparationes, combinationes, ex vegetabilibus. Ex metallicis ſales quidam chemiae progenies, ut vitriolum martis, et ſalia vitriolica: Sed palmam prae aliis meruiſſe videntur, quae ex venere acquiruntur, ſal, ſc. cupri ejuſque tinctura. His addendi ſunt tartarus emeticus, et quorundam ex ſerie ſequenti imminuta doſis.

9. *Fortiſſima* nuncupare licet ea, quae ars dogmatica et maxime rationalis, ob ſaevos et attroces effectus ſaepius expertos evitat, quaeque non ſine imminente machinae periculo exhiberi poſſe perennis docuit obſervatio, quae rarius, niſi ab audaci medicaſtro, vel in morbo quodam acerrimum poſcente auxilium, a me-

a methodico praeſcribuntur : Licet inter hanc et praegreſſam claſſem, exquiſitas metas apponere, difficile quidem ſit. Plurima hujuſmodi ſuppeditat vegetabile regnum : Eminent imprimis καθάρτικα purgantia, quorum amplificata doſis, praeſertim ſi ex reſinoſis deſumatur, crudeles vomitus frequenter excitat. Reſinoſa etenim humoribus noſtris parum miſcibilia ſunt, indiſſoluta cavo ventriculi accreſcunt, ſummos concitant dolores, ſpaſmos, et immanes per ſuperiora depletiones : Evincunt hoc cruciatus iſti, qui aegrotis ſuperveniunt poſt ingeſtam jalapi reſinam, aut ejuſmodi quodpiam, non rite per attritum ſolutum, vel miſcibile alia quavis ratione factum ; dum forte nativo ſuo ſapone fraudantur humores inquilini, et aquoſa pituita plena ſunt omnia. His annumerari poſſunt, helleborus albus, tithymali ſpecies nonnullae, nicotiana, et plantae aliae permultae *deleteriae* dictae ; Claſſem augent, ſtibiata acriora, et illa quoque emetica quae dat mercurius, una cum pleriſque metallicis venenatis.

10. Ex tradita hactenus deſcriptione liquet, 1*mo*, Vomitum excitari non poſſe, ſine quodam

dam aculeo (intelligi velim omne id, quod liquidi vitalis fluxum ſive nervorum actionem mutare queat) ſyſtematis nervoſi, regioni cuidam applicato. 2*do*, Quod ex illius in nervos, horumque in muſculos, § 1. actione, neceſſario fit contentorum gaſtricorum evacuatio. Denique, 3*tio*, Quod haec neutiquam evenire poſſint, ſine partium quarundam compreſſione forti, aliarum ingenti concuſſione, et inſigni corporis univerſi motu. Leniſſimae etiam vomitioni haec ſemper adſunt: Creſcunt ut extenditur emetici potentia, et adaucto ſtimulo, uſque in fabricae ruinam evehi poſſunt.

11. Quum itaque praefatae conditiones nunquam non Ἔμεσις conjunguntur, quum ab hiſce omnino pendeant pleraeque ex iis mutationibus quae ab emeticis ſperantur, producuntur; effectus horum ex triplici illa cauſa naſcentes, quinam ſint, rimaturus, his quaeſitis reſponſa expediam; ſcil. Quid valeat emeticum, quatenus eſt ſtimulus? Quatenus evacuet? Quatenus denique vi ſua mechanica totum corpus afficere queat?

PARS SECUNDA.

De Emeticorum Uſu, a Stimulo ſuo derivato.

12. Nulla adhuc inſtrumenta in corpore animali invenit anatome, quae ſtimulorum objecta propriae exiſtimari poſſunt, praeter ipſos nervos; qui effectus horum, quales quales ſint, primario patiuntur, aliaſque ad partes propagant, uti multiplicibus conſtat experimentis: Haec enim docent, quod non modo in ipſo puncto cui irritans applicatur, mutatio accidit; quin et ad nervi fontem, terminum, ramorum pullulantium fines derivatur effectus, nec non ad ſurculos, oppoſitam corporis plagam luſtrantes, a cauſa licet diverſa.

13. Effectus imprimis ſunt, energiae vitalis ad partem ita affectam acceſſio major, in aliis ejuſdem diminutio; et perdita demum aequabilis leniſque ejus diviſio, curſu magis accelerato, turbatoque ſimul. Haec vero omnia, gradus reſpectu, diverſa futura ſunt, et plus minuſve conſpicua, prout cauſae laceſſentis vehe-

vehementia et copia, nervorum indoles, numerus, atque moles, tegminis denique quo involuti ſunt craſſities, eſt diverſa.

14. Cauſam hanc, ſive energiam, § 13. eſſe liquidum ſubtiliſſimum, mobiliſſimum, omnibuſque fluidi dotibus communibus praeditum, e cerebro, jugi, leni, pacato motu derivatum in ſingulas corporis partes, agnoſcunt plerique doctores. Nec inficias ibit, qui attente perlegerit quae de hac re ſcripſit * Boerhaavius; vel qui ordine adhuc lucidiore expoſuit inclytus noſter anatomiae † profeſſor, perpenderit.

15. Neque admodum veroſimile videtur, effraeno vel praecipiti quovis impetu ſpiritus animales unquam ita rapi, ut enormium tot effectuum cauſa ſint, vel tot morborum eſſentiam conſtituant; hancve in motum proclivitatem ab ingenti quadam et praeternaturali mobilitate oriri poſſe: Quippe quod ſpirituum impetus a fortibus vitae viribus ſolum-

* Boerhaavii Inſtitutiones, § 275. ad 292.

† Monro's Anatomical Treatiſe of the Nerves.

modo

modo pendeat; cum tamen in nullis frequentius occurrant morbi a ſyſtemate nervoſo male affecto nati, quam in eis qui oppoſita potiuntur indole, laxis, ſcil. debilibus, et quibus vitae vires parum firmae ſunt. Legibus certe oeconomiae perquam videtur conſentiens, liquidum hoc, nunc paulo celerius, nunc lentius moveri: Sed tantum intereſſe diſcrimen inter ſummam velocitatem, pigritiamque ſummam, ut ſola ſit haec morborum origo, haud facile conceditur. Spirituum inaequalis diſtributio tumultuum plurimorum, qui nervis vitio dantur, parens eſſe poteſt, omniaque iſta phaenomena, quae morbos, nervoſos dictos, comitari ſolent, longe facilius hoc filo duce panduntur; nec alia ſuadet muſculorum actio.

16. Pungens quodcunque ſatis acre, nervo, ejuſve propagini appoſitum, inaequabilem hanc diſperſionem efficit, ut ſpaſmi et convulſiones ad necem uſque ſaevientes oſtendunt. Peragit idem quoque compreſſio, in nervi cujuſcunque inſignioris ortum facta; aut obſtructus, alia quavis de cauſa, ſpirituum per ſuos canales egreſſus, unde propinqui pleniori horum rivo luſtrari debent. Hanc

augent diatheſin, vel minuunt ſummopere diverſa fluidorum et ſolidorum ratio, quae unicuique aetati convenit; tum et propria cuique temperies: Quo etenim tenerior aetas, quo mollior habitus, eo, caeteris paribus, promptius irritantur nervi, vel comprimuntur. Sententiam confirmat experientia. Raro enim opipare paſcentes pueros, quorum ſanguis ſpiritibus dives, et inſigni praedita mollitie cutis, inquinat contagium varioloſum, ſi modo venenum haud fuerit mitiſſimum, quin excitantur contractiones horrendae: Neque raro ſuperveniunt inſultus, epilepſiae verae prorſus aemuli. Nec ſemper, ob egeſtatem liquidi vitalis, invadunt inſultus hyſterici, cum otioſas, et luxu ſolutas foeminas adoriantur magis, quam quibus ſors anguſtior obvenit.

17. His idcirco ita poſitis, generalem hanc regulam licet ſtatuere; nempe, ſi morbus a ſtimulo particulari cuivis parti applicato naſcatur, huic ſuccurrendum eſt, vel deſtructione cauſae ſtimulantis, vel alterius applicatione parti ādverſae; ſic etenim reſtituto aequilibrio, ſolvitur morbus ſpaſmodicus.

18. Effectus memorati § 13. nervis praecipue et muſculis contingunt. Alii tamen et diverſi vicinas ſaepe partes corripiunt, uti dolor, cutis rubedo, calor; humorum affluxus, tumor; vaſorum compreſſio, obſtructio; horumque deſtructio, ſuppuratio, gangraena. Haec internis juxta et externis corporis partibus eveniunt.

19. Generales aculeorum virtutes hactenus enarratas poſſidet remedium de quo nunc agitur. Hoc tamen ſibi fere proprium obtinet, quod emeticorum actioni certiores plerumque limites praeſcribere liceat, quam interno cuivis ſtimulanti remedio. Haec enim quandoque frangunt repagula, ſaeviuntque ferocius quam expedit, vel ſegnius agunt; dum emetici vis ad votum fere evehi vel reprimi poteſt, ſi atrociſſima tantummodo excipias venena.

20. Ex dictis [§ 13. ad 20.] patet quid valeat emeticum quatenus eſt ſtimulus. Inſignes equidem praeſtat effectus, e quibus eminent ſequentes. Lenior apoplexiae ſpecies, quae ab inerti frigidaque pituita naſcitur, ſi

modo a cauſa recente, nec corpore valde ſenili accidat, emetico prudenter exhibito ſaepe ſolvitur: Inde ſiquidem craſſa ſubiguntur, excutiuntur; aperiuntur nervorum oſcula, horum tramites expediuntur, incitato ſimul torpeſcentis ſanguinis motu. Similes in ſimili paralyſi praeſtat effectus.

Pueris frequens eſt morbus epilepſia, ab acri quovis rodente nervos, eoſque vellicante. Adultis ſaepe contingit ab eadem cauſa, tum et affectionibus animi gravioribus, a dolore ſaevo membra cruciante, a turbato ſpirituum fluxu, qualis hypochondriacis et hyſtericis familiaris eſt. In his caſibus, ſi mobilis ſit mali fomes, iterato vomitorio excutitur.

Membrana iſta muſculoſa, quae tracheae ſegmenta cartilaginea ſibi invicem adnectit, ex fibris conflatur muſculoſis contractilibus ſpaſmo obnoxiis, in his praecipue quibus genus nerveum eſt mobile nimis. Nictu oculi ſaepe conſtringuntur fibrae, adducuntur ſibi mutuo cartilagines, pertinaciter elongationi ſolitae repugnant, crebros trahit ſpiritus aeger, avide captat auras, profunde gemit,

gemit, tandem labore fatigatus, et mox angori ſuccubiturus, prae defectu ſpirituum ſolutum ſentit ſpaſmum, explicatur pectus, et vivere de novo miſer exorditur. Quod prohibet quin ſubito propinata doſis ſalis vitrioli, cupri, hujuſve tincturae, quae irritando ventriculum, ciendo vomitum, ſpirituum iter tramitemque mutando, tumultus hoſce ſedet? omni certe vacat periculo.

Ubi ſanguis eam nanciſci indolem incipit, quae apud veteres *atra bilis* dicta eſt, ubi functiones naturales labaſcunt propter ſpirituum abſentiam; quando quoſdam tantummodo nervos iniquè petunt, hi certos duntaxat mentis corporiſve actiones exercent; vix praeſtantius exhibetur remedium, quam emeticum certis cautelis moderatum, ut poſtea dicendi erit occaſio.

In morbis ſpaſmodicis, aliiſque plurimis nervoſi ordinis, qui proventum ab inertia et languore chylopoieticôn ducere videntur, plurimum prodeſſe viſa ſunt emetica. Chorea Viti, malum certe paucis hujuſmodi

pertinacia ſecundum, vires tamen hujus remedii * quandoque fatetur. Atque, licet ſola vi ſtimulante in his morbis non juvent, ea tamen plurimum proſunt, ſpirituum auctiorem fluxum verſus organa ſollicitando, quae penuriam patiuntur, quaeque exinde deveniunt morbis opportuna.

In malis denique pleriſque chronicis, quum pituita craſſa deceſque habitum obtundit, ignavius hac obſita vibrant ſolida, fluida jam viſcida difficilius propelluntur, perditae vel depravatae facultates univerſae liquidi vitalis inopiam ſegnitiemve demonſtrant, uti in glutine vel acore ſpontaneo; emetica, licet curationem haud abſolvant qua ſtimuli, aliis tamen remediis palmam praeripiunt; praeſertim ſi ad reliquos vomitorii effectus reſpiciamus.

21. Actionis iſtius § 18. alter effectus eſt, fluidorum tenuiorum feſtinata ſecretio; quae duplici ratione comparat Ἐρεθισμα; primo, motum ſanguinis intendit in vaſis majoribus,

* Cheyne's Eſſay on the Gout, p. 113. edit. 4.

horum

horum crebriorem et fortiorem in fluida reactionem excitando, attenuationem conciliando, et hinc ſeceſſui aptitudinem; dein ipſis ſecretionis organis praeparationem expedit, et tranſitum humorum accelerat. Hinc ab eodem ſtimulo diverſae augentur ſecretiones, prout diverſimode in hoc vel illud organum ſecretorium determinatur.

PARS TERTIA.

De Emeticorum Uſu, evacuando producto.

22. Emeti effectus, quatenus evacuat, in duplicem ordinem partiri abſonum haud videtur. 1*mus* eſt, Depletio ventriculi, contentis ſurſum rejectis. 2*dus*, Aliarum partium excretio aucta per conatus vomendi. Quum vero haec pro cauſa proxima haud agnoſcat vomitorium, inter effectus quos mechanice praeſtat emeſis commode magis recitari poteſt, atque evacuatio univerſalis appellari meretur: Altera particularis, ſive eorum expulſio, quae jam in ventre ſtabulantur, vel eouſque per aculei vim pelliciuntur; vel denique per ἀναδρομην a viciniis in

eum advehuntur; de qua proxime ſermonem inſtituere jubet bona methodus.

23. Nocentia per os ingeſta, aut in ventriculum aliunde delata, promptam emetici medelam exigunt, neque ullum novit medicina potentius adjumentum, ad prolem horum morboſam radicitus exſtirpandam, vel ad ſymptomata quaedam atrocia, ſata hinc, lenienda.

24. Ex priorum numero, § 23. ex ingeſtis ſcilicet, cibi potuſque in cenſum merito vocantur. Sors enim vitae ineluctabilis, quamdiu vitales auras carpimus, hos effecit neceſſarios, rationes ſupprimo. Et materiei diverſiſſima indoles, ex qua comparantur alimenta, et a noſtra ſaepiſſime aliena, quorundam incuria, improba aliorum ventris ingluvies, denique vetiti aut nocivi appetitus, error in eſcarum potuumque delectu, et menſurae juſto moderamine, vitia induxerunt ventriculo multiplicia. Hinc ferax malorum progenies, ſtomacho ipſi crudeles minitans dolores, ultimiſque vaſorum anfractibus nocitura. Quae ſane ſingulatim

latim explicare jubet inceptum, denegant autem temporis anguſti limites. Et quidem eis excutiendis operam fruſtra navarem; quum penſum iſtud omni numero abſolutum, veſtris ſub auſpiciis, non ita pridem, in lucem prodiit, in diſſertatione † eleganti, *de noxis ex cibi potuſque uſu et abuſu oriundis.*

25. Copia ingeſtorum major juſto mala parit ibi deſcripta; his levamen afferre ſolet depletio; quae, ſi aeger ευεμης, vomitoriis facienda; hac enim ratione citiſſime auferetur materies ventriculum gravans, et praecavetur ne incocti alimenti reliquiarum pars quaevis in corporis interiora ducatur.

Vitiata qualitas idem petit auxilium, dum adhuc in cavo ventriculi remanet materia nociva, aut non longe ab eo propagatur. Sic, quae nativa gaudent tenacitate, majore quam quae domabilis ſit per corporis vires, ſuum ſecuta genium corrumpuntur, abeuntque in ductile phlegma. Eadem res eſt, ſi expultrix ventriculi facultas praepedita ſit, ut in debilibus ſaepe fieri teſtantur prac-

† Auctore Henrico Tong.

tici: Tunc enim, licet nec copia nec qualitate inſigniter vitiabili gaudeant, ſponte tamen labem contrahunt ingeſta, natam ab ipſa mora auctamque. Hinc prodeunt acrimoniae diverſae ſpecies; hinc muci et pituitae tenacis ſcaturigo: Quae, prout ſingulatim dominantur, vel conjunctim permiſcentur, adjuvante hominis temperie huic illive proclivi, producunt diverſa et nonnunquam plane attrocia ſymptomata. Sic multiplices appetitus depravationes, deletio integra, imminutio vel exceſſus ingens; ſic vitiata, imminuta, vel ſublata coctio vel incocti corruptio, haec ſaepe pro ſuis cauſis proximis agnoſcunt.

Ex aegroto ipſo facile diſcendum erit quid praegreſſum fuerit praediſponens; atque hinc patet indoles materiae, et quibus utendum remediis. Vomitoria fomitem exhauriunt, cauſam proximam funditus eradicant: Hiſce tamen ſolis non fidendum, ſed exhibitis roborantibus (inter haec repetito, poſt debita intervalla, vomitu) ima de ſtirpe tandem morbus reciditur.

26. Sub-

26. Subſtantiae quaecunque acres, caſu vel induſtria in ventrem acceptae, vel medicamenti vel veneni titulo, ſi moleſtia denunciet fabricae noxam inſidiari, citiſſime ſunt expellendae, et per ea loca praecipue, quae portam dant maxime periculis immunem, qua emigret hoſtis, intacta aliarum partium ſalute. Si nulla aut parva copia tubum inteſtinalem ingreſſae ſunt, emeticum caeteris remediis longe praeſtantius, et curationem ſaepe abſolvit; neque erit omittendum, etiamſi portiuncula tantummodo haereat adhuc in ventriculo. Claſſis prima § 7. amplam praebet pharmaciam, qua plurimae venenorum ſpecies debellantur et expelluntur; atque ſi antidoton univerſale ſit, aqua tepefacta copioſe ingeſta, id forte ſuppeditat. In delectu tamen horum prudentia opus eſt; expulſio quandoque haud implet vota, quin tenerae partes quibus applicantur, ab iſtorum injuriis tuendae, mitigandi dolores, et veneni ſaevities compeſcenda, etiam dum citam molimur ejectionem. Hic iterum aſſumpti natura cognita medenti auxilia indigitat, ad infelicis aegri

levamen

levamen tempeſtivum procurandum. Sic ſalia alcalica diluta toxicis opponuntur acidis; ſaponacea miſturam conciliant oleoſis; aquoſa ſales quoſcunque dividunt, ſternuntque vires; acria retundunt ea quae oleo vel glutine viſcoſo gaudent; et ſic de caeteris exiſtimandum. Conſulat lector quae de hac re egregie ſcripſit * Boerhaavius in capitulo *de antidotis*.

27. Neque tantum per emetica fit ingeſtorum evacuatio, ſed et humorum omnium qui in ventriculum deferuntur. Proveniunt illi, vel a vaſis ipſius ventriculi, vel vicinorum: Atque equidem nullibi clarius conſpiciendus pungentium effectus, § 21. expoſitus, quam in hoc viſcere. Id patebit, ſi attendamus ad nervorum per tunicas ampli ventriculi diſperſorum frequentiam, ad glandularum numerum, earumque munus, ad capacitatem denique vaſorum quibus hoc viſcus inſtruitur, molis reſpectu. Mollities tunicarum facilem dat nervulis introitum, cavitas ſpatioſa latam exhibet ſuperficiem. Hinc naſcitur inſignior

* Inſtitutiones medicae, § 1119.

actio,

actio, ſive gaſtrici liquoris uberior ſecretio; quae, quum ſemper larga ſit, ſi augeatur, neceſſario totum corpus quodammodo mutat, humores ſeroſos diſpellendo, exſiccando: Et hinc alii emeticorum effectus pulchri, in morbis a ſeroſa vapidaque colluvie natis; ut in catarrho, leucophlegmatia, diabete, et foedo iſto morbo virginibus exſecrato, qui ab excretorum colore pallente nomen accipit; aliiſque hujuſmodi, de quibus in ſequentibus fuſius dicendum.

28. Finitima ventriculo ſunt hepar atque pancreas. Utraque ſua ſecreta fluida in ejus cavum quandoque immittunt; quae vel copia, vel acrimonia, vel utraque chylopoieſin temerare poſſunt: Bilis ſaepius, rarius ſuccus pancreaticus, morbos excitandi reus incuſatur. Bilem culpabant veteres, ac ſi morborum ſaeviſſimorum parens eſſet: Hanc ſententiam multi inter hodiernos improbant, neque bilem eſſe malorum cauſam adeo frequentem contendunt. Si vero probe patuiſſet his quid per bilem antiqui voluerint, ſaltem ex iis ſagaciores, haud temere abjicienda fuiſſe eorum dogmata forſan judicaſſent. Non enim

ſolus

ſolus ille liquor ab hepate ejuſque veſica ſuppeditatus, *Bilis* titulo inſignitus fuit, ſed totius ſanguinis molis, pars haud aſpernabilis, et ipſiſſima illa quae recentiores *oleum* vulgo appellant; quod, ut ex chemia diſcimus, aeque fertilis morborum ſtirps hodie exiſtit, ac fuit olim ſub nomine celebri *Bilis flavae*. Verum hic agitur de bile veſicularia et hepatica, in ventriculum ſurſum propulſa, vel de liquore alio quovis, ibi advena, qui ſimilia parit incommoda ac ipſa bilis; et talis eſt humor oleoſus, interdum vomitu rejectus, flaveſcens, horrenda dotatus amaritie, nec unquam pene obliviſcendo ſapore, bilem fere referens, ſi ſolum excipias quod bilis in igne ardeat nunquam, hic autem inſtar olei ſinceri flammam concipiat, ſi in ignitos carbones evomatur. Naſcitur ab oleoſis ingeſtis, loci calore mutatis in illuviem hanc ingratiſſimam, accedente gula nimis inſatiabili, ut monet Horatius,

> Nempe inamareſcunt epulae ſine fine petitae;
> Illuſique pedes vitioſum ferre recuſant
> Corpus.———————

Et vera bilis, atque flaveſcens illuvies ejus aemula, ſimiliter hac dote gaudent, quod ſc. ſtagnatio,

ſtagnatio, in loco calido, acriores et magis horrendas utraſque facit: Eadem pene ratione ac oleum quodcunque tepore leni et diuturno fotum, a ſapore blandiſſimo, odore non inſigni, colore ſubflaveſcente, tranſit per diverſos corruptelae gradus ad ſummum uſque putredinis faſtigium, tandemque maximam guſtui acredinem induit, exhalat mephitim olidiſſimam, et nigredine deformi ferit oculos. Similia plane patitur utraque mox ſupra deſcripta bilis, iiſdem ſubjecta legibus, ubicunque in corpore congeſta, donec ſuam promovet expulſionem irrequietus hoſpes. Aliter enim diris et acerbis doloribus, torminibus, nauſeis atque vomitibus, poenam non finientibus, ſed ad mortem uſque vexantibus, excruciatur miſerandus aeger; praeſertim ſi temperies hominis calidior, ſolis ardor, victus denique ranceſſens, aut fermenteſcens, pabulum flammamque praebuerint. En cholera! morborum teterrimus: Febris accenditur, inflammantur viſcera, laboribus ſuccumbunt proſtratae vires, et niſi aſſideat lecto Sydenhamus alter, obrepens in viſcera gangraena duros cum vita terminat labores. Intra confinia, quae emetici vim ſuſtinent, materies ſedem

dem habet, quae cauſa morbi eſt. Indicatur ablatio cauſae; cur non emeticis, aut deorſum purgantibus, vel utriſque tentatur egeſtio, cum in primis viis adhuc ſtabuletur? Haud ſane immerito, in tanta morbi feritate, horum uſum repudiant medici prudentes: Nam utcunque fructus perplurimum in aliis, vel in inferiore ejuſdem morbi gradu, praeſtat hoc vel iſtud medicamen; in violenta tamen cholera, loris quam ſtimulis magis utendum eſt, ut facile attendenti patebit. Acer enim et inflammans iſte liquor, abraſo prius omni muco gaſtrico, et, quouſque pertigerat, inteſtinali, nudis applicatur nervis, ſaevos excitat dolores, ſpaſmos fortes, pertinaces, febreſque adurentes incendit; vomitu perpetuo evocatur mucus ſuperſtes, cauſa provehitur, et continuato emetici impetu, reduplicantur effectus horrendi. Licet etènim minimo polleat aculeo, hic tamen, qualis qualis eſt, hoſti indigenae addit vires, ſtimulus ſtimulo committitur, et horum ſociato nixu perit aeger. Si ad hoc ſtadium morbis non attigerit, neque ſpem occidunt mali ominis ſymptomata, ut curationem vomitoriis tentemus jubent omnia. Rei cardo eſt delectus medicamenti peritus.

Nec

Nec bilis, nec oleoſa materies, ſive bilis altera, omni fluido promiſcue unitur; hoc reſpuit, illud vero ſequitur petitque. Quod itaque ad miſturam parandam maxime idoneum eſt, iſtud uſurpandum indolis morbi cognitae habita interim ratione, cui ſemper opponi debet auxilium. Hinc ſaccharata, mellita, ſaponacea aceſcentibus permiſta, ea omnia quoque § 7. *n.* 1. recenſita, quae mole ſua pluſquam erethiſmate quovis agunt, prae caeteris conferre videntur.

'Quandocunque bilis vacuanda eſt,' inquit * Foreſtus, 'poſt juſcula multa, vel poſt po-'tationem liberalem, provocandus eſt vomi-'tus; nam bilis ut oleum his ſupernatat, et 'ob id facilius evacuatur: Adde quod acri-'monia ejus temperetur mixtione harum 'potionum.' Norma certe in vomitionibus bilioſis ſanandis nunquam non obſervanda; neglecta quippe peſſima quandoque profert incommoda. Catharticum temere ingeſtum corruptae materiae partem abripit ad inferi-

* Foreſti obſerv. lib. 18. obſ. 3.

ora, forte et in ſanguinem defert: Hinc iterum novae miſeriae.

29. Tanta liquoris pancreatici diluvies occurrit raro, quae ſolitaria morborum cauſa queat haberi, natos tamen augere poteſt: Quum enim in ſanitate larga adeo ſit ejus ſecretio, ut Brunneri experimenta docent, in morbis ex lympha redundante ortis, deveniet adhuc copioſior, hujuſque per emeticum evacuatio ſeroſam colluviem imminuet.

30. Febrium acceſſiones nauſea et vomitu plerumque ſtipantur, aliiſque ſymptomatibus, quae ventriculum male affici ſignificant. Caute tamen erit diſtinguendum, an ab ipſo viſcere, an ab ejus contentis, oriatur aegritudo: Alia enim curatio ventriculo, cujus membranae vexantur inflammatione, alia corruptis ſordibus gravato, inflammatione libero, ſubminiſtranda. Antiquioribus haud adeo perſpectum fuiſſe videtur, hoc viſcus morbis iſtiuſmodi aeque eſſe obnoxium, ac aliud quodcunque; donec Fredericus Hoffmannus †, in ſuis exercitationibus, hoc ma-

† F. Hoffman. Diſſertationum Decad. 1.

lum ſaepius obvenire docuit, quam vulgo creditur. Signa poſuit diagnoſtica, quibus ſcopulos latentes vitaret medicus, in quos facillime alioquin impingeret incautus. Haec omnia pro ſuo more, cum largo foenore in libello *de cognoſcendis et curandis morbis* expoſuit Boerhaavius, nitidamque medendi methodum illi attexuit. Ab iſtarum commotionum, quae in febris initio toties ventriculo ſuperveniunt, veri fontis inſcitia, lites iſtae ſollicitae inter practicos agitatae, de emeticorum fructu in hiſce tractandis enato, profluxerunt. Adverſus horum utilitatem hi ſtrenue arguunt, effectuum exitialium adducunt teſtes, et fronte torvo vituperant uſus. Alii ſucceſſus ſalutares ad ſidera tollunt, nec minus indubitatam hiſtoriarum fidem appellant, ad ſuas partes firmandas. Et quidem facile liquet neutros a veritate penitus aberaſſe. Quantos etenim cruciatus induceret vomitorium ventriculo, cujus vaſa ſanguine craſſo turgent, et infartiuntur; cujus diſtracti nervi, leviſſimo contra ingeſta colliſu, atroces patiuntur dolores; cujus denique tunicae diſtenſae tumore, duritie, atque dolore, phlegmonem verum in corporis exte-

riori natum omnino referunt? Quantas itaque clades in hoc rerum ſitu editura eſt operatio cum tanta violentia conjuncta? Saepius autem vitia, ab incluſis contentiſque producta, moleſtiarum autores exiſtunt: Tunc ſane laude dignos praeſtat effectus, et Hippocratem, Sydenhamum, et clariſſimos quoſque in arte viros, uſum eorum ſancientes habemus; nec non et ratio ſuffulta praxi idem effatur. ‘ * Si vomitus,’ ait Sydenhamus, ‘ vel inanis aliqua vomendi propen-
‘ ſio, interturbaverit aegrum, medicamen-
‘ tum emeticum omnino praeſcribendum erit.’
‘ Namque, ut teſtatur † Hippocrates, ſi
‘ quis homini vomenti aquam multam bi-
‘ bendam dare velit, εκκλυσθησεσθαι δι ἁ εμεει συν
‘ τω εμετω, αυτω μεν δια το ἐμεειν ὁ εμεσος
‘ παυεσθαι.’ Nec ſolum hoc commodum foeneratur, quinetiam et medico et aegrotanti per totum morbi decurſum quaeſtui ingenti erit, uti ex Sydenhamo diſcimus. ‘ ‡ Sane vomitorium propinare, ubi iſti-
‘ uſmodi praegreſſa eſt vomendi procli-
‘ vitas, adeo eſt neceſſarium, ut niſi hu-

* Sydenham. de morbis acutis, § 1. cap. 4.

† Hippocrates de locis in homine, claſ. 2. p. 16. edit. Mer.

‡ Sydenhamus ubi ſupra.

‘ mor ille expellatur, in ſentinam complu-
‘ rium malorum difficilium ſit abiturus,
‘ quae crucem figent medico toto durante
‘ medicationis tempore, aegrumque in haud
‘ leve periculum conjicient. Ex horum
‘ praecipuis et maxime ſolitis eſt *diarrhoea*,
‘ quae ut plurimum in deferveſcentia febris
‘ conſequitur, quotieſcunque emetica, quan-
‘ do ea ſuadebat indicatio, omiſſa fuere.—
‘ Porro etiam compertum habebis, etiamſi
‘ proclivitas illa ad vomendum jam pridem
‘ praeterierit, diarrhoeam tamen, quampri-
‘ mum vomitorium exhibueris, plerumque
‘ ceſſaturam, dummodo emetico ferendo
‘ pares fuerint aegri vires.’ Nec ſane teter-
rimum rerum conſpectum vir egregius deli-
neavit; namque putrida haec materies in
ventriculo ſtagnando magis putrida evadit,
perque bibula vaſorum orificia, vacua jam
per calorem et liquidi jacturam reddita, in
ſanguinem ducitur, ſordibus malignis cruo-
rem polluit; et febrem omni numero ſaevi-
orem reddit; quae cuncta feliciter anticipata
fuiſſent, ſi vomitorium, quamprimum ſe
patefecit haecce propenſio, fuiſſet exhibitum.
De emeticorum delectu monitum hic quo-

que repetendum erit, ſcil. quod ea elegamus, quae ſordibus abluendis aptiſſima, quae harum indoli adverſentur, eamque mutent vel corrigant; quae denique diluentis vicem gerant, ſi forte (quod pote eſt) portio aliqua in ſanguinem hauriatur. His intentionibus arridebit claſſe 1ma, § 7. memorata, cum nonnullis ex § 8. decerptis efficaciora reddita; oxymel ſcilliticum, v. g. cum radice ipecacuanha; hauſto dein larga manu oxymelite ſimplice, aliove liquore tenui, prout res nata ſit.

31. Dum de febribus agitur, cautelam fas eſt in memoriam revocare, quae apud practicos pleroſque proſtat, nec praetiriri debet; ſcil. quod in omnibus morbis, ubi plethoram adeſſe, vel ad eam eſſe vergentem habitum, ſua ſigna demonſtrant, et ſimul aegri conditio vomitorium poſtulaverit, ſanguinis miſſio ſemper praemittenda eſt; ne fortaſſe illud ingens conamen, et tetanus momentaneus, vaſa diſtenſa rumpat; vel major ſaltem quam par eſt ſanguinis impetus ad ea loca feratur, in quibus reſiſtentia minus firma vi cedat illatae; diſrupta vaſa ſua liquida

quida fundant, et immediate pereat aegrotus per apoplexiam, vel haemoptoe, vel inſanabili inde phthiſi, pulmone labefactato, tandem trucidetur; aliiſve viſceribus pariter infractis e medio tollatur. Illa vomitio videtur optima quae brevi poſt ſectam venam cietur; certius enim incommoda evitantur a plenitudine caeterûm oritura; certius ſimul inſequuntur emetici effectus ſalubres, praeſertim ſi ex febrium genere ſit morbus, qui utrumque expetit auxilium. Depleta ſiquidem per v. ſ. vaſa, cito quandoque de novo turgent; vel ob ſanguinis rarefactionem, vel ejus auctam molem per largos potus, in quos ardor et ſitis aegrum impellunt, eadem naſcuntur ac prius incommoda: Nec ante repetitam, v. ſ. exhibere licet emeticum, quod paucis poſt primam evacuationem horis tuto fuiſſet propinatum.

32. In febribus intermittentibus mirum quid exſequi videtur Παιδευσις εμετϰ, quae effectus quandoque exhibet aeque difficiles explicatu, ac fere ipſius morbi natura. Licet enim illius ſedes praecipua ſit in extremis vaſis ſanguiferis, aut aliquando forte in ner-

vis; humorum tamen evacuatio, qui in alvo colliguntur, haud minimi eſt momenti. Proſtant ſiquidem exempla hominum, qui vomitu ſolo curati fuere; hocque vel ſpontaneo, a benignis naturae auſpiciis excitato, vel arte famulante inducto: Dum interim ſanguinis evacuatio, niſi in plethoricis, plerumque obſit, et gravi medenti taedium pariat. At repetita prudenter emetica, corruptum in primis viis morbi fomitem ſenſim conſumunt, ſubigunt, ſanguinis fluxum accelerant; morbum denique vel tollunt, vel tutam expediunt febrifugo viam, quod caeteroquin vel morbi fomitem figeret magis, vel evacuatione, ſurſum aut deorſum excitata, proprias ſuas perderet vires.

33. Multiplices affectat natura vias, per quas domitam febrium materiem, aptatamque ut per portas arte caſuve recludendas eliminet, iterumque ſanum corpus reddat. Nunc per emunctoria certis excretionibus aſſueta, per ſalivam, vomitum, ſeceſſum, ſudores aut urinas eam ejicit: Nunc autem ad alia minus idonea loca deſpumationes emittit. Tumores ad exteriora nati, aliaque ſimilia hujuſmodi ſunt.

ſunt. ‘ * *Quae educere oportet, quo maxime* ‘ *vergunt, eo ducito per loca convenientia,*’ omnibus eſt regula bene nota. Si per ſalivam febrem judicatam fore conſtet, manus auxiliatrices eo ſunt movendae. In vomitu idem erit praeſtandum, ſi criticum eum eſſe novimus, vel a materia excitatum naturae inimica; ſedandum vero, ſi a ventriculo inflammato, et vomitus vomitu demulceri nequit. Eadem res eſt, ſi per alia quaevis excretoria egredi tentet. Quo diutius enim in corpore ſiſtitur cocta fluenſque ſanies, eo pejora creat incommoda. Triſte, ſed verum hujus rei praebet exemplum febris purulenta, quae a reſorpto tabo variolis ſaepius ſupervenit, ſecundaria pleriſque nuncupata. Nec maligna minus eſt alius cujuſcunque febris acutae materies critica putreſcens, quae inſtantem exigit evacuationem. Praeſto adſunt remedia, ſingulis evacuationibus promovendis deſtinata: Haec uſurpanda prout viam monſtraverit natura. Advertendum tantum eſt, quod uti materies morbi cocta per cutis ſpiracula difflatur, corrupta labe uſque adeo inquinata ut ſanos

* Hippocratis Aphor. § 1. aph. 21.

ſaepe

ſaepe polluat; ſimilis tamen ad interiora ventriculi et inteſtini, per horum exhalantia vaſa deponitur, cathartico nunc, nunc emetico, feliciter auferenda; ne forſan, '* *Quae per* ' *morbos poſt judicationem intus relinquuntur,* ' *morborum reverſiones faciant.*' Atque ſuadet ea propter Celſus †, ' *Vomitum poſt febrem* ' *eliciendum eſſe.*'

34. His numeroſum morborum agmen licet adjicere, qui bona et eximia multa ab hoc ſubſidio mutuantur. Pauci enim ex chronicis exiſtunt, qui emeticorum ope non indigeant; ſed eorum recenſio particularis ultra metas protraheret orationem. Morbi enim plerique, puerilis aetatis affeclae, diatheſis rachitica, ſtrumoſa, ſaburra vermium fomes niduſque, victûs errores, atque ſimilia, ſaepe emeticis feliciter emendantur. Arthritis, hydrops, ſcorbuti ſtadium clementius, adultis infeſta, quandoque lenimen ab evacuatione per ſuperiora facta ſentiunt; chloroſis et fluor albus molliori ſexu eadem ſaepe poſ-

* Aphor. Hippoc. § 2. aph. 12.

† Celſi medicina, lib. 3. cap. 7.

cunt

cunt auxilia. Catarrhus, diarrhoea, dyſenteria, coeliaca affectio, morbuſque omnis a ſeroſa colluvie natus, vomitorii commodum agnoſcunt. Vix opus eſt memorare, quantum ad grandaevos annos comparandos conducant; idoneis intervallis exhibita. Hodie non deſunt homines, qui veterum conſilii memores, licet gulae placendae parum dediti, nec ſcopis indigentes ad reliquias crapularum auferendas, tanti aeſtimant vomitionem, ut bis terve per menſem contractas in ſtomacho ſordes per ſuperiora propellant. Illi, qui accuratam maxime vivendi normam ſervare ſtudet, ſaepius in potu victuque errare neceſſe eſt. Hinc ſerius ociuſve culpa ingruit ventriculo, ibique formatur primo morbi futuri ſtamen: Ægritudo ſive nauſea moleſta interdum ſentitur, minuitur cibandi deſiderium, aliaque imminent ſymptomata, varia pro genio cauſae vitiique diverſo. Plerique ſtatim ad tincturas celebres plantis amaris aromaticis, ſpiritus ardentis ope elicitas, confugiunt, iſtis confidunt, indulgent; donec horum ſub jugum miſſi torrefactis et effoetis viſceribus moriantur. Nullum quidem remedium novimus, quod tot tantaque eis polliceri videtur,

qui

qui ad cruditates generandas a vitae genere ſedentario proclives ſunt; natum enim morbum aufert, cauſam proximam delet, eradicat, acorem eluendo quae hanc plerumque conſtituit. Iis itaque, qui vitam ſtudioſam degunt, vel quorum corporis affectus exercitationes motuſque prohibent, qui denique artibus utuntur ſellulariis, vel qui ob aliam quamcunque cauſam eiſdem malis obnoxii vivunt, iis, inquam, crebrum emeticorum uſum commendarem.

PARS ULTIMA.

De Emeticorum Uſu, a mochlica ſua virtute petendo.

35. Tertium adhuc ſupereſt quaeſitum enodandum, quid, ſc. emetica proſint, quatenus vim exercent mechanicam, et virtute mochlica expugnant morbos? Quae itaque partes afficiuntur, quid patiuntur, quae in reliquis exinde mutationes producuntur, et in toto corpore contingunt, proxime ſcrutandum.

36. Con-

36. Contractis itaque [§ 1.] muſculis abdominalibus et rigefactis, fere inſtar columnae iſtius oſſeae, quae poſteriora tuetur, vi hujuſmodi nulla movendae; compulſo ſimul valide diaphragmate, cui inferius oſſa pelvim conſtituentia immobilia opponuntur; omnimodo ventris infimi capacitas anguſtatur, dum hinc atque hinc, ſuper ſubterque, contenta ejus arctiſſime conſtringuntur; nec punctum fere in tota regione abdominali ingentis preſſurae expers reperitur; cujus vim admodum inſignem eſſe teſtatur vehementia qua ſurſum exploduntur ventris contenta: Certa enim ſuadent experimenta, nullam ineſſe ventriculo potentiam contractilem, quae iſta poſſunt exhaurire, donec conſpirans ſimul partium modo memoratarum compreſſio fortis evacuationem integram abſolvat. Tantae ergo violentiae viſcera ſubjecta mollia participes fiunt, unde inſignes utileſque effectus exſpectandi.

37. Antequam vero harum diſquiſitio inſtituatur, incolarum abdominalium actiones, methodo ſequenti, generatim diſponere haud alienum eſt; ut, perſpectis horum muneribus, facilius

facilius cernantur mutationes morboſae, clariuſque pateſcat quot quibuſque modis in ſubſidium venire poſſit compreſſio vehemens, mechanica, alterna, in haec viſcera.

38. Horum munera praecipua ſunt, 1*mo*, Ingeſtorum praeparatio, ut naturae egeſtatibus ſuccurrendis nata ſit materies. 2*do*, Hujus ſeparatio, ut quae refectioni apta ſit ab ineptis amoveatur. 3*tio*, Ejuſdem in ſanguinem, per inſtrumenta extra abdomen poſita jam converſae, ulterior elaboratio. 4*to*, Secretio liquorum vitae uſibus egregie famulantium. 5*to*, Denique partium ſolidarum et fluidarum reſidui, effoeti nunc facti, a nutritiis ſeparatio et ejectio. 1*mo*, Officinam praeparantem ventriculus et inteſtina tenuia praebent. 2*do*, Fluidiora a craſſis ſegregant vaſa lactea et abſorbentia. 3*tio*, Sanguis ad arterias amplas meſeraicas, caeteraſque per ventrem diſperſas, perpetuam patitur concuſſionem, compreſſionem reciprocam, propulſionem; quae omnia, in ſplene praeſertim, conſpicua. 4*to*, Cruor ita ſubactus, per appropriatas portas, v. g. per hepar, pancreas, totamque glandularem catervam, ubique per infimum ventrem diſpoſitam,

poſitam, perpetim emanat, indole et forma mutatis, juxta determinatas organi cujuſque naturae leges. 5to, Ramenta craſſiora, corrupta, et per tubum protruſa, tempeſtive excernuntur: Sanguinis pars tenuis et aquoſa, detritis onuſta ſalibus, oleiſque nutritioni ineptis, per renes abit, conſtituitque urinam. Cuncta haec officia, tempore eodem et eodem auxilio promoventur; alternata, ſcil. et conſtanti agitatione; quae reſpirationis eſt comes aſſidua et neceſſaria. Patet enim, quod, ſi ſiſteretur motus abdominis, et lenis iſta ſuccuſſio ceſſaret, nulla vis adeſſet, quae per tot tamque anguſtos tortuoſoſque canales, ingenti interdum oneri ſubjectos (ut ii ſunt, qui per inferiora repunt) contenta in eis fluida propellere valeret: Impetus quo vibrat cor, laborí eſſet impar; et inſignis illa poteſtas, abſorptio dicta, qua fluida ex cavis intra venas hauriuntur, licet tanta ut nullis praeſcriptis finibus coercenda ſit, cito deficeret. Nam ſponte nata viſciditas, ceſſante motu externo, canales paulatim obturaret, atque in exilibus tubulis tot impedimenta deponeret, ut ſenſim in omnibus progreſſus brevi tolleretur, in quibuſdam viſceribus, vel in omnibus, prout malum

malum proſerpſiſſet latius, aut arctiora caſtra metaſſet. Et quidem morborum aetiologia demonſtrat, plurimos ex eis, qui abdomine infenſi ſunt, ex hac vel iſta, vel utriuſque ſimul cauſis naſci. Remedium igitur attenuans, motumque properans, prae caeteris indicatur.

39. Niſu itaque vomitus, viſcerum ſuperficies contra ſe mutuo valide comprimuntur, eorum moles imminuitur, compinguntur tranantia fluida, atteruntur, propelluntur; adverſus canalium latera urgentur, et qua datur exitus confeſtim exprimuntur. Hinc ſecretio fit expeditior, celerior expulſio; craſſi reſolutio, ejuſque ſubactio et ejectio; denique actionum omnium [§ 37.] maturatio, organis ipſis vigor, et, omnibus ſuperatis obſtaculis, agendi facilitas; ex quibus primario pendent et quantitas et qualitas iſtarum ſecretionum, quae ſanitatis praeſidia haberi poſſunt.

40. Interior ventriculi cavus conferto glandularum agmine vaſiſque exhalantibus obſidetur, ex quarum oſculis, villoſis, flexilibus,

ilibus, aſſiduo fluit humor, quo lubricus madiduſque ſervatur ipſe, defenduntur ab aſſumptorum injuriis nervi, promovetur chylopoieſis. Humorum vero craſſities, ſive indoles mucoſa, qui haec loca ſalutant, accedente motu languidiore (prioris plerumque comite) neceſſario ſecretionem minuit tardatque; glandulas infarcit viſcidis, ſenſimque munus earum evertit. Hinc gaſtrici fluoris penuria, cruditas inde et indigeſtio, appetitus deletus, aut nimius, ſtomachi ardor, aliquando nauſea ſitiſque. Eadem quandoque occurrunt mala, ab arefacta ſordium cruſta cavitati ventris obducta; ſicuti poſt febrem acutam diuturnam, ubi vulgus adſtans, aut medicus forte crudelior, injuſte naturae poſcenti ipſam lympham denegabant. Diluentia in hiſce caſibus haud ſufficiunt; haec enim ulterius laxant vaſa; hinc tardius propulſa fluida cunctando brevi craſſeſcunt, haud parvo labore iterum ſolvenda. His infortuniis iſtud remedium haud infimi uſus eſt, quod praeſtat effectus ſupra enarratos [§ 29.] Inſtar enim pulmonis alterius totum abdomen cenſendum eſt. Munera quidem ſibi propria ſingula viſcera nanciſ-

cuntur, ſed motus ſupervenit aliunde, quo perpetua fluidorum in unoquoque mutatio inducitur, provehitur; perinde ac in pectore res agitur, miſtio, ſcil. compreſſio, attritio, ſolutio, atque ſimilia. Ejuſdem cauſae effectus idem, licet organis diverſis abſolvatur. Vomitu itaque cito perficitur, quod lentis vicibus conſequi nitebatur, ſed incaſſum, natura.

41. Alvus conſtricta, ſegnis et ſolitariae vitae aſſueta comes, haud naſcitur ſaepius quam a deficiente muco inteſtinali, et liquoris gaſtrici, glandularum et vaſorum [§ 40.] ſobolis abſentia. Hic enim molles fluidaſque foeces reddere debet; ille vero lapſum facilem iis conciliare. Cauſa defectus eadem, ac ſupra [§ 40.] memorata, et levamen eadem medela, adſcito motus et exercitationis auxilio, tentandum. Ab hoc ſolo fonte ſemper enaſci malum non aſſeritur; at vero, ſi ab alio quocunque ſemel fuerit inceptum, augmentum exinde capit, et alvus ſegnis tandem aſtricta devenit. Foeces quidem educunt κατω purgantia blanda, praeſens auferunt incommodum, moleſtias iſtiuſmodi

modi ſtatus plerumque confortes leniunt. Si vero remediis, quae tam pulchra prae ſe ferunt, nimis indulgeat aeger, quoties alvus obſtipata reducit aerumnas, ſecutura nocumenta vix evitabit. Talia ſunt, alvus adhuc aſtrictior, humiditate omni cum foecibus educta, et viſcerum oppilationes, infarctiones a craſſo relicto. Duplici itaque de cauſa [§ 34. 40] ſeſe commendat emeſis, hominibus iſtis, qui vita fruuntur inerti; quatenus ſcilicet et expellit cruda, et viſcidos attenuat liquores, accelerando motum, et proinde humectantis optimi vice fungendo.

42. Ventriculum et inteſtina gravat nonnunquam vitium priori oppoſitum; ſcilicet aquoſi laticis diluvium, quo ſubmerſa ilia fatiſcunt, calorem amittunt, et inſtrumenta muneri vitali dicata huic obeundo imparia fiunt. Gravitas et languor circa praecordia; ſputatio frequens; edendi cupido perexigua; aquoſae colluviei ejectio per os, mane praeſertim infeſta; nauſea gravis brevi deſinens; ſedes liquidae, crebrae, doloris expertes, una cum corporis univerſi debilitate, inertia, atque pallore hanc indicant illuviem, ſimul-

que ſeroſam ſolutamque ſanguinis indolem. Memorata ſymptomata correctionem haud obſcure innuunt. Expreſſio liquidi redundantis, et robur additum canaliculis primo neceſſaria ſunt, tum ſecutura inde compacta ſanguinis craſis, et mutata diatheſis pituitoſa: His imprimis conferunt emetica. Hinc itaque patet cur ventrem ſolutum vomitus comprimat, compreſſum ſolvat, juxta Hippocratis placitum, Celſo * repetitum, ratumque.

43. Pancreatis ſtructura et munus, ſalivalium glandularum aemula, illud objiciunt ſimilibus malis, ſecretioni nempe impeditae, vel nimiae. Utrique prodeſt emeticum; obſtructionem quippe, ſi non nimis pertinax ſit, reſerat, exuberantem laticem potenter emungendo exſiccat.

44. Inferius paulo, ab oſculis lacteorum exſuguntur liquefacta ingeſta, quae ſtatim ad glandulas meſeraicas feruntur. Tardus iſtorum motus, et vaſcula tam exilia et tor-

* Celſi medicina, lib. 1. cap. 3.

tuoſa

tuoſa tenuiorum a craſſis ſeparationem promovent, dum difficile reddunt chyli ad ſanguinem iter; illis praecipue qui debili ſtamine potiuntur, praviſque ſimul veſcuntur eſcis; vel quibus harum partium ſtructura mala contingit. Imprudens aetas, temperies ſequas, et victus crudioris maleſuada fames, pueritiam, prae aliis vitae ſtadiis, morbis ex infarctis et tumefactis glandulis meſeraicis opportunam reddunt. Cauſae ſimiles in adultis ſimiles edunt morbos, ſed rariores; nam reipſa conſtat puerulis hujuſmodi infarctiones, glandulas abdominales occupantes, frequentiores devenire. Iſtis enim annis vix nobis occurrunt epulae gratiores, quam fructus crudi, immaturi, legumina et farinacea viſcida, et, ſi magis indiſſolubiles pariat natura cibos, iſtis utimur imprimis, eos importune petimus, eventus luxurioſae gulae nulla facta ratione. Inde maſſa tenax in alvo formantur, quae in fluorem viſcidum, vix niſi forma mutatum, tandem reſolvitur, dilabitur e ſtomacho, occurrit bili inerti, ea diluitur, vix tamen ſolvitur: Tenuior pars abit in lactea, brevi prae tenacitate haeſura; quotidie renovatur cauſa, creſcit augeturque

obſtructio, durior evadit tumor, vicina comprimit, aditum in venas claudit, atrophia naſcitur, et homunculus indies marceſcit. Vel, ſi ad tantam ſaevitiem morbus non attigerit, nec penitus obturentur glandulae, imperfectus chylus ſanguini affunditur, eumque labe contaminat; ſecreta, crucis proles, vitiantur, affectis ubique fere glandulis; eiſque praecipue tumefactis, quae collum faciemque obſident: Unde vultus fit praetumidus, torvus, et veram ſtrumam, aut diatheſin eo vergentem, adeſſe deſignat. Tetrica certe rerum facies haec, et medenti nodus intortus; ſuum enim robur perdidere ſolida, juſto viſcidius fluida coguntur: Hinc depravantur, et quae aſſumptorum mutationem in corporis naturam ut plurimum debebant perficere, eam imperfectam relinquunt. Praeterea, glandulis obturatis, praecluditur ipſe meatus, per quem novas vires ad ſanguinem mitti oportebat. Huc adde, quod ſemel oppilatae glandularum cryptae difficilius purgentur, et muneri ſuo minus aptae reddantur: Unde facile conſtat, ad morbum adeo pervicacem debellendum omni ſubſidii genere utendum eſſe. Tumorum reſolutio imprimis

imprimis tentanda, ut vitae fabulum depravitas medela, robur debilibus, quantum victu et remediis fieri poſſit, ſubminiſtrentur. Deinde partium, in quibus mali ſedes, ita firmanda craſis, ut gravantia liquida ſubigant, expellant; curata interim vivendi norma. Qui ſitum meſenterii callet, intelligit facile, quanta cum violentia, niſu vomitus, illud undequaque prematur; et quinam inde futuri ſint effectus in glandulas recens infarctas: In vicina foeda ſpurcitie cumulata [§ 39.] in pancreas eadem ſcatens [§ 43.] in ventriculum denique, ſurſum evocando liquores acres [§ 34.] hunc infeſtantes, et novas ſubinde vires morbo ſuppeditantes. Sedulo autem perquirendum erit, ſi integra ſint viſcera, ſi nullo ulcere corrupta, ſi a labe putreſcente penitus immunia; ſin minus imprudens emeſis hominem laedet. Idem quoque verum eſt, ſi ex ſola laxitate continui ſolutio metuatur: Tunc enim virtus mechanica parcius adhibenda eſt. Nil fere aliud prohibet, nec magni fructus ſpes erit inanis, dummodo mobilis ſit obſtipans materies, et repetita vomitoria commode ferant aegri vires.

45. Inter caetera abdominalia ſplen viſcus eſt tenerrima compage donatum, cujus columnae carneae, muſculoſae, ad fluxilem firmandam fabricam, plus quam ad inſignem cruoris quam accipit copiam propellendam, aptatae videntur; nec labori par eſt arteriae robur, aut cordis impetus, per vaſorum numerum, et anfractus tortuoſos, retuſus. His vero ſuccurrit aſſidua et lenis agitatio, quam connectio ſplenis cum diaphragmate, muſculorum abdominalium propinquitas, poſitio pendula, iſti conciliant. Atque per has cauſas praecipue ſanguinis progreſſum per vaſa lienalia conſervari cenſendum eſt. Ideoque, ſi motus aſſuetus ſiſtatur, vel diu minuatur, (ut in eis fit, qui vita utuntur deſide, et domi peracta) cunctatur in cellulis cryptiſque ſanguis, evadit craſſior, et maximo cum obſtructionis periculo res agitur; quum debita mobilitas, et impetus aſſuetus, facilis liberique transfluxus autores, ceſſant. Diverſa morbi aetas, cauſa diverſa varium poſtulant lenimen; nec una medendi ratio lienoſis omnibus convenit. Si recens infarctio, nec ingens durities; ſi ab exercitationibus omiſſis, et ex acriore adhibita rei cuicunque cura naſcatur; ſi gravedo diſtentione

ſtentione dolens, nec copioſa materies, atque temperies εὐφορος quoad caetera, compreſſio mochlica cum fructu poteſt adhiberi. Si vero durities ſchirrum indicet tactu, aut ſi praegreſſa febris inflammatum lienem in puris ſacculum converterit, ad alia fugiendum remedia, ne ſchirrus irritatus in cancrum abeat; vel perruptis clauſtris, quibus pus coercetur, purulento diluvio ſubmergatur abdomen, aut ſordida tabe obruatur hepar.

46. Inter morbos, qui jecori infenſi ſunt, foeda iſta, et luteo colore cutim inficiens aurigo, ſaepiſſime ſenſibus ſe prodit. Cauſas hujus mali proximas in ſcriptis medicis plurimas invenimus; ſingulas autem enarrandi vel diſcutiendi laborem mihi minuit elegantis illius exercitationis auctor, qui de ictero tractatulum *Tentaminum Med. vol.* 1*mo* * inſeruit. Caeterum, cum egregio viro, qui nomen ſuum latere voluit, cenſere licet, longe frequentiſſimas icteri cauſas calculos eſſe, in veſica fellea ſatos, per meatum tortilem ex ea derivatos, et limine nimis anguſto haerentes. Nam prae-

* Medical Eſſays, &c. vol. 1. art. 33.

ter

ter hiſtorias, quas ipſe auctor adducit, ratiocinia ejus plurimum ſtabilire videtur alia, † quae volumine ſequente traditur. Si itaque haec ſit vera rerum facies, (ut maxime verofimile videtur) caeteris remediis mechanica ſunt anteferenda: Ambulatio, equitatio, aliique motus quibus fortiter jactatur corpus, in hunc cenſum vocantur, ut eorum ope lapillus ab anguſtiis extrudatur, et bilis repreſſa effundatur. Deſcenſum ſane egregie promovent auxilia recenſita; ſed deficiunt nonnunquam, et duriori cuneo morbus indiget. Si unquam proſit emeticum virtute quavis mechanica, unquamve ſperandi effectus hujus ſalubres, et morbi ſedes, et cauſae genus, hic mentem fructus ſpe lactant, nec ſaepe inani. Hauſto enim copioſe liquore, turgidulus fotu tepefacto ſaccus, ipſi fere ductui conſtricto apponitur, eumque laxat; dum urget a tergo bilis, ingenti contractione [§ 36.] protruſa. Aut ſi cauſas alibi ponamus, v. g. in porro biliario, in primo ejus exortu a portarum extremis, aut ubivis praeterea, eaſque materiem craſſam, purulentam, vel haerentes lapillulos

† Medical Eſſays, vol. 2. art. 28.

agnoſ-

agnoſcimus ; haud minimae efficaciae erit emeticum, ſi artis adjumento malum debellari poſſit.

47. Per ſympathiam, ob commune nervorum conſortium inter ventriculum atque renes, perque motus turbaſque in illo concitatos, quotieſcunque hi dolore afficiuntur, viam indigitaſſe videtur dux natura, qua ſedibus excutiatur quicquid inimicum foret renibus diuturniore mora. 1*mo*, Gypſea, mucoſa, purulenta materies hic nata, vel per metaſtaſin aliunde huc provecta, craſſior quam quae per exiles canalium fines exire poſſit, vel egreſſa diutius quam fas eſt in ſinu renali ſtabulans, augmentum quotidie capit, mole creſcit, vicina premit, vel atterit, et cruciatus atrociſſimi exiſtit auctor. Saepe formatus jam calculus caſu in ureterem, hoſpiti tanto recipiendo nimis anguſtum, protruditur ; cujus tunicae muſculoſae, ſenſiles, ſcabra lapilli ſuperficie raſae, arctius hunc complectuntur, et ulteriori progreſſui fortius obſtant, ſaevientibus interim doloribus omnem fere tolerantiam ſuperantibus. V. S. imprimis celebrata, univerſalibus et topicis ſtrictura tollenda eſt ; deinde

deinde vis mochlica praeſtat quod arte praeſtandum. Nec unica haec eſt vomitorii virtus in hoc morbo, ſed fomenti vicem gerit epotus liquor, qui cum injecto clyſmate balneum internum faciunt, quod aquoſo ſuo halitu relaxat contracturas, et, ventris infimi contenta adaugendo, in renes aut ureteres vim magis intendit.

2do, Morboſa renum flacciditas, infracto vaſorum robore, tale nonnunquam emitti patitur aquoſi laticis profluvium, ut ſpeciem iſtius morbi ſimulet, qui Διαβητης Graecis appellatur. Exit crebro urinae aquoſae, tenuis, decoloratae, odoris ſaporiſque pene expertis, copia ſpectabilis ; ſitis adeſt moleſta, virium proſtratio, fluidorum ingens diſpendium, et ſolidorum detritio. Pejor morbi ſpecies ea eſt, in qua fit effluxus liquoris albicantis, chyloſi, ſubdulcis, reliquiſque ſtipata ſignis, quae propria huic morbo dedit praxis vetuſtior, et comprobat hodierna. Licet enim morbus rariſſimus, cernitur tamen aliquando. Sive jam natus ſit a relaxatis renum vaſis, ſive a fluidorum diſſoluta craſi, ſive ex alia quacunque

cunque προφασει, urti loquitur * Sydenhamus, ‘ Curativae indicationes, ad ſanguinem cor- ‘ roborandum, invigorandum, ac pariter ad ‘ fluxum urinae praeternaturalem reſtringen- ‘ dum, omnino dirigendae ſunt;’ cui addere licet, ad morboſam renum laxitatem auferen- dam.

Quae de virtute emetici exſiccante ſupra [§ 42.] dicta ſunt ſatis evincunt, quantum prioribus indicationibus haec reſpondeant. Renum ſitus, oſſibuſque duris vicinitas, quid mochlice ii patiantur oſtendunt, et quam fortiter impetus humidum redundans ex ipſa renum ſubſtantia emungat. Sane excutit quodammodo macerantem lympham, et amiſ- ſum tonum fibris elatere ſuo privatis reſtituit.

48. Vix opus eſt monuiſſe quam immaniter uterum ſarcina tumentum comprimant muſ- culi [§ 36.] ſpaſmo validiſſimo contracti. Propius igitur inſtante partus excluſione, ſe- dulo fugienda ſunt quaecunque iſtis calcar addunt. Sed eandem ob cauſam videre eſt, quanta ſpes ab eodem fonte profluat, ſi par-

* Sydenhami epiſt. reſp. oper. p. 272.

turienti

turienti deficiant vires et repetito conamine eouſque robur proſternatur, ut quamvis ſitu legitimo potiatur infans, nec juſtam molem multo exſuperet, nec adeo arctetur exitus, quin par operi potentia partum produceret; emeticum, quod prompte, quod potenter agat, quod cito coercendum, fauſte ſaepe rem peragit; nec tumultus, calores, aut incendia febrilia parit, quae comites atque ſequaces ſibi adſciſcunt aromata, et praeſertim ardentes ſpiritus iſtis acuminati, et ejuſmodi plura, quae ab aniculis, ſuo more, in magnum plerumque aegrae incommodum affatim porriguntur.

Alii ſunt uteri affectus, qui levamen ab eodem remedio capiunt: Quum vero, licet ultimas ſedes in hoc viſcere poſuerint, vitia tamen per totum corpus diſpergunt, hae tanquam effectus generalis cauſae ſpectandae. Fomes itaque in univerſo habitu delendus, priuſquam utero redierit priſtina ſalus. Quantum huic intentioni arrideat emeticum, poſtea dicendum.

Perſpectis hoc pacto ſingulatim praecipuorum viſcerum culpis, ſaltem quae a remediis mochlicis

mochlicis commoda accipiunt, effectus qui totum corpus reſpiciunt perpendendi, et mutationes indagandae, operationis tantae progenies.

49. Praeter inſignes vaſorum truncos, qui ventrem pervadunt, qui ad organa diverſa ſanguinem deportant, qui ab extremis referunt, quique in unum collecti portarum ſtirpem conſtituunt; milleni iſtorum ſurculi viſcera perreptant, et variis ambagibus iter tentantes, plures formoſoſque vaſorum plexus conſtituunt; per quos aſſiduo propelluntur humores inquilini. Per vomitum vaſorum ſitus, magnitudo, et figura omni momento variantur, ita ut actio nata ſit pulmonum actioni ſimillima. Si vero numerum vaſorum abdominalium, et vim quae eis eorumque contentis niſu vomitorio applicatur, in cenſum revoces, pulmonum vires, et actiones maxime potentes longe ſuperari videas. Adde quod, hoc ipſo temporis puncto, ſtrenuius multo ab iis res geratur quam ſolito more fit. Inferre itaque nil vetat uniuſcujuſque munus ſanguificandi ſummopere exinde provehi; id eſt, compactio, denſatio, attritio, ſolutio, miſcela

cela cruori eximie conciliantur. His quoque famulatur aucta ſanguinis velocitas; comprimuntur enim arteriae, et quae per ventrem vadunt, quaeque etiam per artus diſpertiuntur. Muſculi enim plerique leviori tetano, dum niſus inſtat, horreſcunt, ut cuivis patebit hominem evomentem ſpectanti. Muſculi, qui pectus humeroſque ambiunt, ſuſtentant coſtas figuntque; exporrecta brachia ſuffulciunt corpus, quibus opitulantur illi muſculi qui dorſum veſtiunt, antrorſum curvatam ſpinam in ſitu commodiſſimo detinendo; crura rigeſcunt, et inſtar immobilis ſtatuae aeger ore hiante vomitus inſultum exſpectat. Vaſa itaque ſanguifera muſculorum comites, aeque ac abdominalia, preſſurae ſubjiciuntur, et eadem pati debent: Minuuntur arteriarum diametri; ruit ergo compreſſum fluidum quo patet exitus; receſſum prohibet urgens ejuſdem a tergo columna; progredi neceſſe eſt, ocyus itaque venas appetit: Harum tunicae minus rigidae facilius vi cedunt externae; idem itaque his accidit, comprimitur nempe pelliturque ſanguis; valvulae frequentes pedem revocare vetant, pergit ergo celerius et pleniori fluvio ad cor accedit;

inde

inde crebro repetitis ictibus perculsus, propere cursus iterat eosdem. Praedicta docent, nec obscure; 1*mo*, Haematopoiesin emendari. 2*do*, Secretiones augeri. 3*tio*, Solida novis viribus instaurari. 4*to*, Denique sanguinis momentum intendi, et sepositis impedimentis circulo liberiori frui. Atque ex hisce principiis facile patebit, quinam sint morbi της μοχλειας δεομενο, et quare tot tantaque, tum in fluida, tum in solida, efficiat vomitorium: In paucis tamen ejusmodi morbis horum usus perstringere haud a proposito alienum erit.

50. Praeterita jam hyeme, solida, acri gelu prius rigescentia, laxantur iterum, atque fluida, ab enervatis vasis minore impetu propulsa, verno tepore spissescunt, et levi de causa in extremis vasculis sistuntur, deficiente quoque consueto solidorum robore; aeris humiditas sordes accumulat, et corpus debile, foecibus gravatum, multis malis opportunum reddit. Inducit fortasse natura febrem benignam intermittentem, quae molestum onus brevi excuteret, sanum vegetumque corpus daret, si sibi commissa ab opere non deturbaretur. Urget tamen quaerulus aeger, dictis amaris medicum lacessit,

et ſpreto conſilio, forte ab aniculis intempeſtivum morbi levamen, millenis ſaepius malis ſtipatum, ſibi comparat. Emeticum ſecundat naturae auſus; et, ſi radicitus haud extirpet, tutam tamen expedit in ſanitatem viam [§ 32.], etiam ſaepius repetitum prodeſt. Febris intermittens autumnalis emetici ſubſidium haud minus efflagitare videtur, tum ad amurcas ex primis viis exhauriendas, tum ad vitia, quorum radices altius haerent, corrigenda.

51. Febris lenta, continua, morbo priori affinis, gradu major, ab eiſdem forte cauſis, idem circa tempus, quandoque graſſatur; immobilior videtur materies, quaeque diuturno naturae labore nullo modo ſubigi vel expelli poſſit: Hinc nulla remiſſio; parum tamen mordax eſt, ergo haud impetu magno exardet. V. S. cum ſanguine emittit vires, quae in hac febris ſpecie fatiſcunt nimis; alvi ſubductio, ſi lenis, parum confert, ſi fortius res agatur, debilitat. Naturae inceptis favere medici eſt; febri ergo flammae ſubjiciendae, ut irritos conatus abſolvat, craſſa ſubigat, et expellat ſubacta quo nocitura non ſunt. ‘At ſi frigus eſt et torpor,’ inquit Celſus *, ‘et jactatio corporis; non alienum

* Celſi medicina, lib. 3. cap. 9.

'num eſt, in ipſa febre, dare mulſi tres aut 'quatuor cyathos, vel cum cibo vinum bene 'dilutum. Intenditur enim ſaepe ex eo fe- 'bris, et major ortus calor ſimul et priora 'mala tollit, et ſpem remiſſionis, inque ea 'curationis, oſtendit.' Nec quidem minora ab emeticis efficiuntur. Adeſt nempe vis inſignis ſpirituum motum accelerans [§ 18. 19.], evacuantur ſordes in ventre latentes [§ 30.], viſcida ſubiguntur, ſi quae abdominis incolas obſideant [§ 39.], denique ſanguinis intenditur curſus, et augentur ſecretiones [§ 49. *n.* 2. 3. 4.] tenues, per exteriora praeſertim.

Neque ulla fortaſſe eſt methodus efficacior vel utilior, qua ſudor elici poteſt, quam poſt exhibitum vomitorium; non modo enim in ipſa operatione copioſus plerumque exprimitur, ſed exteriora verſus tam valide truduntur liquida attenuata [§ 49.] ut, dimotis obſtaculis, quae orificia cutanea claudunt, effluant pleno rivo humores iſtuc determinati. Atque huc egregie confert opiatum, quod poſt emeticum dari optimo conſilio ſuadent practici. Vomitorium praeterea evocat ſquallorem primas vias foedantem, et prae-

cavet ne exhibito hydrotico, eoque diſperſo per corpus fomite, manus hoſtiles in viſcera convertantur.

52. Eadem doctrina innuit quanti ſit uſus emeticum in tenui acrique catarrho, in aſthmate humorali, aliiſque ejuſmodi morbis a frigore correpto natis; quum, ſciz. retenta materies perſpiranda, vaſa eouſque inerti fluido replet, ut functiones omnes poenas luant; quum gravitate pigra ſenſus hebeſcant, et ad ſtateram fere corporis pondus auctum eſſe diceres; diſtenſa denique vaſa doleant, parteſque ſenſiles aegrè laceſſantur. Cum haec et alia ejuſmodi ſymptomata ſe produnt, remedium exhibendum eſt, quod portas reſerare, liquores ſuperfluos expellere, atque ſolitam agendi facilitatem corpori reſtituere poſſit. Haud parum his conſert emeſis; et quacunque corporis parte aegritudo ſuas ſedes poſuerit his cauſis orta, multum valere poſſit. Ponamus glandulas, caeteraque vaſa circa fauces et collum, tanta ſcatere aquarum copia, ut defluxionem brevi adfore indicent ſigna, vis mochlica ſaepe ſalutaris eſt. Rubens etenim tumenſque facies, oculi ſcintillantes lachrymis ſuffuſi, liquore ſuo madefacti nares, et ſalivae mucique rivu-

rivulum fundentes oris fauciumque lacunae glanduloſae, conatus emetici nunquam non comites, liquido demonſtrant quanta cum vi appetat has oras ſanguis, et quantus in vaſcula obſtipata impetus ſit: Dum canales oſſei cedere neſcii, et inſignes vertebralium et carotidum internarum arcus et aſcenſûs obliquitas cruoris ad cerebri appulſum valde retundunt; Fluxilis ergo hujus compages minus periclitatur, impetu ut plurimum extrorſum determinato; parum tamen introrſum vis aucta devenit. Et partim forte hinc, partim a virtute ſtimulante et evacuante, ratio patebit cur in vertigine, hemicrania, aliiſque ſimilibus, vomitus tanti ſit uſus; cur in epilepſia quandoque in ſenibus adeo profuerit, ut fatentur obſervatorum ſcripta: 'Inveteratam epilepſiam, quae etiam per 'xx annos aegrum traxit, curatam novi,' inquit Hoffmannus *, 'ab emeticorum uſu et 'ſpecificis antiepilepticis ex animali regno pe-'titis.' Nec mihi deſunt hiſtoriae ſimiles; at referre prohibent limites praeſcripti.

53. Impedit eadem ratio, quo minus horum uſus in variolis diſtincte enarretur; non modo quatenus evacuant, et avertunt alioqui futura mala [§ 30.], ſed ob alios etiam quibus

* Hoffmanni Diſſertat. decad. 1. p. 204.

potiuntur effectus [§ 49.], et eximias inde manantes mutationes. Puſtulis refertam eſſe cutim ponamus, vaſcula perſpiratoria ita compreſſa ut coactam materiem vis ſolita nequeat protrudere: Hoc in caſu contentorum moles augetur; calor febrilis ita ad interiora exaeſtuat, ut organa intus exhalantia adeo areſacta, vel alioquin obſtipata evadant, ut ſuum munus exſequi non poſſint. Ex utraque parte cohibetur idcirco fluidum, quod diuturnum nimis circuitum jam patitur, quodque longiore mora peſſima mala pariturum eſt. Calor enim nimius acrimoniam gignit, unde ſtimulus partibus nervoſis: Hinc iterum febrilis aeſtus ſitiſque, fortaſſe delirium, huic ſupervenit; ab aucta fluidorum mole anxietas praecordia infeſtat: Quum interim calore craſſiora deveniunt fluida, coagulantur, et inepta magis reddunt ad exitum ſibi aperiendum per ea loca quae ſaepe indigitat natura, ſciz. per fauces vel inteſtina. Exigunt haec mala coagulati in vaſis exhalantibus utriuſque loci reſolutionem, evacuationem, reliquiſque conciliatam fluiditatem, nec aucta interim febre pluſquam per lene opiatum tuto coercere queat. Qui praedicta [§ 13. 18. 39. 49.] de eme-

emeticorum effectibus, tum in fluida, tum in ſolida, in mentem revocaverit, haec non inepta eſſe auxilia, imo aptiſſima forſan praedicabit. De febribus acutis agens Sydenhamus haec profert: ‘ * Saepe miratus ‘ ſum,’ inquit, ‘ dum forte materiem vomitu ‘ rejectam aliquando curioſe contemplabar, ‘ eamque neque mole valde ſpectabilem, nec ‘ pravis qualitatibus inſignem, quî factum ‘ fuerit, ut aegri tantum levaminis exinde ſen- ‘ ſerint; nempe vomitu peracto ſaeva illa ‘ ſymptomata (nauſea, v. g. anxietas, jacta- ‘ tiones, ſuſpiria luctuoſa, linguae nigredo, ‘ &c.) quae et ipſos excruciarant, et adſtantes ‘ perterrefacerent, mitigari ſolent ac ſolvi, ‘ quodque morbi reliquum eſt εὐθυμως tole- ‘ rari.’ Quum vero ex antea dictis pateat, fluida craſſa ſolvi, canales obturatos reddi tranabiles, totum corpus arefactum humectari, ſimulque nociva expelli, mirandum non eſt levamen tam ſubitum inde evenire.

54. Beneficiis ſic curſim enarratis, quae ab emeticis lucrantur morbi acutiores, via ſternitur ad alios, in quibus occaſio minus praeceps, nec adeo fallax experientia, licet judi-

* Sydenhami Op. § 1. cap. 4.

cium ſatis difficile. Vomitoria certe iſti morborum cohorti praecipue adverſari videntur, qui vel in ipſo ventriculo, vel in viſceribus prope ſitis, ortum ſedemque obtinent, et hujuſmodi omnes fere morbi chronici ſunt. Vitia enim hinc nata longe lateque brevi diſpertiuntur, iterumque effectus temeratae ſalutis ad haec loca revertuntur. Hoc nullibi clarius conſpicitur, quam in eis morbis, qui cum mentis alienatione junguntur, quique a pravo victu vel in eo aſſumendo errore, ut a cauſa proxima eveniunt. Licet enim ab animi pathematibus, ab evacuationibus, aliiſve cauſis remotioribus enaſcantur, victus tamen inepta ratio ſaepe conſtituit propiorem. Innumeri nervorum furculi ad ventriculum emiſſi, neque ad ipſius nutritionem, neque ad motum quemlibet provehendum tantummodo comparati ſunt, ſed potius ad chylificandi operam adjuvandam. Diſperſis itaque nimia copia ſpiritibus, perditur ex cauſis ſanitatis una; aſſuetae, ſcil. ciborum menſurae, in noſtri naturam mutandae, imparia deveniunt inſtrumenta: Aſſueta tamen menſura aſſumitur, et dum caetera aequalia non ſunt, neceſſario enaſcitur indigeſtio,

geſtio, et inde alia mala. Haec origo ſaepiſſime eſt affectionis hypochondriacae, et reliquorum quandoque graduum mentis laeſae, a vacillatione leviſſima ad ſummam uſque inſaniam. Docent phaenomena hujus morbi in fluidis prae primis haerere culpam, hancque eſſe nimiam craſſitiem, ſive partium mobiliſſimarum diffiationem: Hae ſunt ſpiritus animales, halitus cruoris vaporoſi, et aquea dein ejus elementa, quorum minus majuſve diſpendium morbum efficit leniorem vel graviorem, dum ſanguis per varios ſpiſſitudinis gradus tranſit, donec in veram bilem, a veteribus atram dictam, degeneret. Quodcunque de hujus morbi natura cognitum habemus, praeceptis chemicis ut plurimum acceptum referendum eſt, quorum ope hic, uti etiam in aliis bene multis, plurima phaenomena, alioquin abdita prorſus, deteguntur. Ex chemica ſanguinis analyſi conſtat, difflatis aquoſis, ſupereſſe ſalina, oleoſa, terreſtria, diverſimode conjuncta, ſanitatis muneribus parum apta, utpote quae craſſiora et leviora ſanguine ſano. Eadem etiam chemia fidis experimentis demonſtrat, oleum, ſalem, terramque unita, plus aëris in ſe continere, quam aquam reliquis conjunctam.

junctam. Hujus teſtis ſit calculus humanus. Ergo ſolida praepollent fluidis, ocyus haec circumaguntur, et augetur tenuioris diſpendium, dum craſſeſcens reſiduum intimam cum diluentibus admiſtionem reſpuit. Ingeſta haud ſatis ſubacta morbo addunt, viſcera molliora obſtipant, actionem minuunt tolluntve : Hincque ſplenis, hepatis, hypochondriorum oppilationes, tumores, dolores. Sanatio requirit viſcido reſtitutionem fluoris et miſcibilitatis. Haec fiunt per diluentia, ſaponacea, et attritum. Diluentia ſola parum valere oſtendit expoſita morbi natura: Sola ſaponacea, efficaciora licet, raro ſufficiunt; adjuvantibus vero attritu et calore, omnem quam poſſident vim exerunt, docente chemia. Denique attritus in hoc morbo raro per ſtimulantia vulgaria intenditur, quin haec ſaepe nociva comperta ſint. Inde quidem augetur ſanguinis celeritas, ſed ſimul augetur ejuſdem rarefactio. Compertum autem eſt, attritum eſſe in ratione celeritatis, ſoliditatis, et compreſſionis. Si itaque auctae rarefactionis ratio ſuperet rationem auctae celeritatis, inde non modo non augebitur attritus, ſed, e contrario, minuetur. Poſtulatur itaque remedium quod ſanguinis celeritatem intendat, rareſcentiam

cohibeat. Tale, in niſu vomitus, reperiri, facile ex praegreſſis liquet. Hinc obiter patet utilitas ſubmerſionis in aqua frigida.

55. Huic morbo ex diametro opponi videtur hydrops, in quo lympha ſeroſa viſcera ſubmergit, et palleſcens ſanguis corpus deturbat ingrato colore, docetque aquam exuberare, et vitio diverſo, oleum, terram, ſalemque deficere.

Diſpoſitione pituitoſa in fluidis ſuborta (quae a multiplici cauſa fit, quarum aliquas haud inconcinnè memorat Poeta *,

Corrupti jecoris vitio vel ſplenis, acerbus
Creſcit hydrops: Aut cum ficcatae febre medullae
Atque avidae fauces gelidum traxere liquorem:
Tum lympha intercus vitio gliſcente tumeſcit,
Secernens miſeram proprio de viſcere pellem,)

ſtatim ita debilitantur ſolida, ut torpidos liquores vix propellere poſſint. Hinc ſtagnatio in lateralibus vaſis, et functionum languor. Indies accumulatur ſerum, turget, propinqua laedit, et perpetuo renovantur morbi cauſae. Si contingat haec in unico vaſe, hydatis formatur; ſi κατα φλεβας ſeu per tunicam cellularem per omne corpus diſperſam, fit leucophlegmatia; ſi ruptum vas effundat contenta in cavum quodcunque,

* Sammonicus.

localis

localis hydrops ſuboritur: Si denique (quod ſaepiſſime in cauſa eſt) actio venarum abſorbentium debilitetur, ſive ab obſtructione in eis nata, ſive a mero languore et inertia ſolidorum; dum ſuo munere funguntur arteriolae inhiantes, et ſquallentem laticem ſine fine in cavitatem eructant: Hic continuo accumulatus ſpiſſeſcit, vaſa omnigena brevi effoeta reddit, et hydropem topicum producit. In hoc morbo curando, primaria morbi cauſa minuenda vel adimenda eſt; attenuantia, evacuantia, exſiccantia, roborantia uniuſcujuſque ordinis uſurpanda; ut tandem amoveatur onus humidum, minuatur latex, et vaſa eouſque viribus inſtaurentur, ut officio debito fungantur, et fluidorum nativa bonitas redintegretur. Hiſce omnibus abſolvendis, dicata plurima apud practicos remedia invenimus. Neſcio quot ſpecifica celebria ab iis recenſeantur, quae uno fere ictu morbum profligent, ſi fides eorum promiſſis ſit habenda. Diſplicet aliis haec curta ſupellex, et in vitium incidunt contrarium; pompoſam memorant farraginem, et remediorum cumulo obruunt aegrum. Utraque praxis evitanda, neque ſolis emeticis curatio committenda, nec ſine his tentanda; cum longiores adimant labores, et compendio

quaſi

quaſi remg erant, quae pluribus adminiculis caeteroquin indiget. Remedia antihydropica, prius memorata, ſuum opus abſolvere videntur, motum et attritum fluidorum ciendo, pellendo, diffiando exuberantem lympham. His omnibus ſimul conducit niſus emeticus fortis, ſaepius repetitus; craſſa quippe comminuit, obſtructa reſerat, propellit ſtagnantia, humida exſiccat, ſecretiones aquoſas auget, ſolutum ſanguinem compingit, reſolvit viſcidum, celeriorem ad extrema facit appulſum, movetque ſudores. Adde, quod ingentem in tumefactum abdomen vim exerit, et quum in hoc tantummodo ſedem habet morbus, nec quopiam viſcere peſſundato, nec in corpore valde ſenili, et recens ſit, repetitis emeticis, bene inſtituta diaeta, et exercitatione modica, res tuto expeditur, niſi in iis ſit, ‘ * quibus inu‘ tilis libertas eſt, nec tam facile coguntur ac ‘ ii, qui ſervitutis beneficio convaleſcunt.’ In hydropis etiam provectiori gradu haud parum conferre viſa eſt emeſis. Idem comprobat hiſtoria apud Forreſtum † recitato de quodam hydropico, qui ‘ inflatus ventre, ‘ manibus, pedibuſque et facie, a medicis

* Celſi medicina, lib. 3. cap. 21.
† Obſerv. lib. 19. obſ. 33.

‘ deſti-

'deſtitutus, et tanquam deſperatus, adiit lit-
'tus marinum, et naviculam per aliquot
'miliaria aſcendit in altum maris, et provo-
'cato vomitu, poſt vomitum exercitio utens,
'ſanitati reſtitutus eſt.' Huc afferre licuerat Sydenhami ſuffragium, quod in tractatu ſuo eleganti de hydrope crebro fert, et ſententiam de horum commodo plurimis exemplis, iterata obſervatione ratis, ſuffulcit; at diſerta ejus verba in arte ſeniores probe callent, ad ipſum libellum juniores lubenter amandantur, cujus evolutio,

——————ſi propius ſtes
Te capiet magis;————et
————decies repetita placebit.

Hoc tamen in morbo haud mochlicis pugna committenda eſt, niſi viſcera aliaque ita ſe habeant, ut antea [§ 44.] obſervatum.

56. Ex enarratis hactenus liquido patebit, in morbis pleriſque a colluvie ſeroſa natis, quaenam ab emeticis exſpectanda ſint. Patebit quoque horum uſus inmorbo qui puerulis utriuſque ſexus infenſus, gravis nec infrequens, rachitide ſcilicet, qui a vitiis in abdomine natis, ad medullam uſque diſperſis ſaepius productus, ipſa corporis fulcimenta pedetentim ſuffodit, et duriſſima oſſa, inflexibilia fere, nimis facile flectenda reddit. Mali ortus et progreſſus, curatoria indicata,

nec

nec non ratio, qua huic morbo vomitoriis iteratis occurri poſſit, ex ſequentibus clarius cernuntur *.

1*mo*, Oſſa, quae in toto corpore jam ſolidiſſima ſunt, olim gelatinae flexiles, membranae, cartilagines fuere, quae paulatim dureſcentes, per diverſos ſoliditatis gradus, oſſa tandem fiunt rigida.

2*do*, Hujus indurationis cauſa duplex exiſtit, materiae, ſcil. oſſificae a ſanguine ſecretio, et ſecretae appoſitio firma, ſive compreſſio particularum ad ſe invicem fortis. Haec effecta ſunt virium vitae integrarum, et muſculorum vicinorum incumbentium. Ideoque,

3*tio*, Si ſanguis particulis oſſium ſtructurae idoneis minus dives ſit, ſecretio minor erit, et muneri ſuo ineptior. Porro, ſi abſit actio muſculoſa, et vires langueant, altera cauſa oſſificationis abeſt. Hinc itaque,

4*to*, Liquet iſtas conditiones, quae rachitidem parere poſſint, omnes ejuſmodi eſſe quae chylopoieſin et haematopoieſin depravare ſolent. His ergo imprimis erit proſpiciendum, et medicina id genus eligenda, quae et vitium in ipſis officinis diverſimode corrigat [§ 18. 27. 39.], auferat, nocivos ejus

* Vid. Alex. Monro's Anatomy of human Bones, p. 34, &c.

effectus,

effectus, in aliis locis pullulantes, emendet, atque impetus motuſque formantis defectui optime ſubvenire poſſit [§ 49.]. Viſcerum quidem ſaburram feliciter educunt purgantia : Sed ſi fortiora fuerint, aut nimis ſaepe repetita, vires proſternunt admodum, craſſiora relinquunt, ſed vapida, et obſtructionibus creandis magis opportuna ; et debilia jam facta ſolida adhuc debilitant. Emetica valide expurgant viſcera, nec vitae viribus adeo funeſta, ſolida corroborant ; imprimis ſi victus accuratus inſtituatur, ſi corpus in frigidam ſaepe immergatur, ſi denique ſpecificis leniantur ſubinde nata ſymptomata.

57. An in arthritidis inſultibus utilis ſit vomitus necne, quibus, quando, et quoties exhibendus, definire haud leve eſt. Illi, quorum auctoritas mecum prae plurium valet, in paroxyſmis omnino ejus uſum dehortantur, niſi urgeant nauſea, vomitus, aliaque ventriculi ſorde ſcatentis ſigna ; et tunc lenia tantummodo admittunt. Alii * vero haud infimi ſubſellii medici ſtant contra ; urgetque unus †, ſe obſervaſſe ‘ inſultus arthriti-
‘ cos conſuetos, perpetuo fere mitiores, quan-
‘ do ſtatim inter initia leni emetico, vel ſolo,

* See Dr. Cheyne's Eſſay upon the Gout, p. 77, &c.
† Hoffmanni Diſſert. decad. 1. p. 411.

' vel cum laxante mixto, prima regio a ſordibus ' evacuata fuerit.' Qui valet, has lites dirimat: Ego, iis miſſis factis, emeticorum uſum in alio ejuſdem morbi ſtadio demonſtrare paucis conabor; id eſt, inter paroxyſmos, ad futuros avertendos. Acris illa materies, in anguſtiis haerens, et dolores cruciantes excitans, poſt exacerbationem podagricam (ſi recte res geratur, nec intempeſtivo medicaminum externe vel interne applicatorum uſu ſuffocentur incepta naturae) expellitur, ſudor lenis locum affectum perfundens, vel, ſi deterius adhuc malum, et ſedes habeat profundiores, erumpens tophus, inſequens inde levamen, ſymptomatum omnium remiſſio, hanc evacuationem criticam fuiſſe deſignant; ideoque morbi fomitis in ſanguinem, parteſque nobilioribus vitae functionibus dicatas, nequaquam metuendus erit regreſſus, ſed quod morbi jam ſupereſt inſtar alius cujuſque chronici ſaevioris abigendum. Fluida, ſi prava ſint, mendis purganda, infirma ſolida roboranda, vires totius corporis inſtaurandae, ſtirps denique atrocis mali quantum valet ars ſuccidenda. His plurimum confert medicina gymnaſtica, quae prae caeteris aliis ſuppetiis infracta membra nova virtute reficit. Equitatio, vectio in rheda, curru, &c. ſunt optima ſubſidia. At quoties haec prohibet parum amica tempeſtas anni? Hyeme aut vere ſaepiſſime

piſſime contingit podagrae deceſſus, pejus tamen adhuc ſi autumno intermittat. Aër enim humore gravis frigiduſque foras egredi omnino prohibet; atque intra porticus, vel domus penetralia, pedibus inſiſtere, aut motu quovis corpus torqueri, aegre admittunt artus diſtorti, et nuperis cruciatibus claudicantes. Frictio ſane leviter tantummodo mundat exteriora, neque evacuat e viſceribus pituitam, quae ob omiſſum tamdiu motum ea neceſſario gravare incipit. Praeterea raro deſunt aegro gratulabundi ſodales, qui pignus amicitiae charius dare neſciunt, quam propriam ſalutem poculis evertere, hominiſque ex morbo recreati exitium moliri, dum ſanitatem priſtinam verbis exoptant, revera autem inſidias ſanitati ſtruunt. Ex his atque ſimilibus cauſis, emeticum ſaepe ſaepius perquam neceſſarium eſt convaleſcentibus, neque ex praedictis colligere arduum erit qua ratione exercitationis etiam fortioris vice fungatur. Patet etiam quibus modis actionibus animalibus opitulentur vomitoria, craſſa quomodo ſubigant, denique plus minuſve ſingulis indicatis reſpondeant: Neque verentur ex practicis ſagaces, bis in menſe, ſaepius quandoque, iſtiuſmodi hominibus vomitum praecipere. Perſpectis itaque horum commodis in chronicis pleriſque, eos morbos levi pede percurrere animus eſt, qui ſexui ſequiori tantummodo infeſti ſunt.

58. Non modo vitae ratio, ſed ipſum fere vitale ſtamen, foeminis molliorem ac laxiorem temperiem dediſſe videtur, niſi ſors durior alienam impertita ſit, atque mens ſana, in corpore ſano laboribus improbis indurato, eis firmitudinem donaverit maſculae vi omnino aemulam. Eſt tamen vitae ſtadium, quo etiam haec mulierum conditio ex errore levi peſſimis obnoxia malis evadit; eo, ſcilicet, quo ſexus diſcrimina jam adfutura ſint, id eſt, ad vel circiter annum aetatis 15: Huc uſque enim, ſenſu medico, genus unum idemque eſt. In quibus autem diſcrepant, quare, quae cauſae phyſicae diſcriminis, referre non opus eſt; fuſius ea ab aliis tractantur. Sed brevis morborum recitatio, quum lucidiori argumentorum explicationi inſervire poſſit, propoſito haud incongruum videtur.

1*mo*, Adveniente molis augmenti termino, eadem organa, quae corpori virgineo pabulum miniſtrarunt et incrementum, plus pergunt conficere quam ſola corporis nutritio jam exigit; quod ſupereſt ſanguinis per vaſa uterina jam periodice emittitur. Si diutius retineatur, ob deficientes vaſorum vires, vel impeditum exitum, plethora plethorae ſuperadditur, et morbi virginei indicia cito ſeſe produnt.

2*do*, Si vero aquoſus, ſolutus, vel acris ſanguis uterum pervadat, et momentum abſit quo

dilatentur vaſorum oſcula, eouſque ut rubrum ſanguinem deponant; is lateralia permeat, in glandulas, quae cavum uteri ubique obſident, infunditur, craſſeſcit; exit tandem liquor viſcoſus, colore diverſus, nunc albus (a quo *fluor albus* appellatur) vel albicans, vix lintea tingens, flaveſcens, virideſcens, nigricans, et omnibus affectus coloribus qui inter hos exiſtunt; nunc ſine foetore tranſit, nunc graveolet; nunc mitis, ut in initio plerumque, et diutius vigente morbo acrior, coloratior, foetidior evadit. Patentes glandulae tenuiores quoſcunque ſeparant humores, et eliminant; inter quos nutritivos, qui ſolidis vigorem, momentum fluidis ſuppeditaſſe debebant. Hinc indies a viribus aliquid ſubtrahitur, perit membrorum virtus, labitur digeſtio, vitio magis indelebili fluida corrumpuntur, et per totam corporis oeconomiam ſerpit labes, qua nulla (expertos afferentes audivi) ex toto chronicorum agmine, ſexui crudelior, curatu difficilior, aut effectibus exitioſior. Nam fatiſcunt imprimis inſtrumenta ipſa, quorum ope caetera reparari debuerant, et morbi ſedes in viſcere ponitur, cui omnium difficillime fit medicina. Id quidem haud cito labefactatur, ſed ſi ſemel infectum fuerit, vitium diu ſervet; ‘ Quia pars eſt,’ inquit Foreſtus*, ‘quae prompte ‘ recipit aliarum partium excrementa, tum ob

* Foreſti Obſerv. lib. 28. obſ. 21.

‘ ſitum

‘ ſitum inferiorem, tum ob multitudinem vena-
‘ rum eo pertingentium, tum etiam propter con-
‘ ſuetam illam naturalem purgationem.’ His adde compagem ſolidam et vaſculoſam, remediis, quorum vires longo circuitu decoquuntur, antequam huc deferantur, haud facile cedentem. Etiam poſt emendatam cruoris indolem, laxa glandularum fabrica pertinaciter obſtat medelae, atque ea medicamina, quae harum mollitiei adverſantur, conſtringunt quoque arteriolarum orificia, et moleſtiorem reddunt menſtruationem. Laxitas nativa, victus prava ratio, vita deſes et luxurioſa hunc morbum plerumque inducunt. *Rarius enim*, ut ab eodem Foreſto obſervatum, *id pati viſae ſunt agreſtes mulieres*. Eadem quoque ‡ fluxum uterinum ſuppreſſum ſaepe praecedunt. Remedia ergo hiſce morbis adhibenda ſunt, quae noxis, ex iſtiuſmodi cauſis ſubortis, obviam eant; neque vomitoria repetita omittenda ſunt: Praeter enim effectus, qui hactenus indicantur, ſtomachum expurgandi, ſolida ſtimulandi, et ſanguinem mire atterendi, hunc tanto impetu verſus uterum propellunt, ut exempla proſtent § in quibus ſola vis ejuſmodi mechanica tardatum fluxum repente profuderit. Atque, niſi δυσεμης ſit aegra, vel incommode ferat emetici actionem, haud minora in fluore albo quam in pleriſque chronicis exſpectanda ſunt. Saepius

‡ Opera Doctoris Freind, p. 67. 80.
§ Plateri obſ. med. p. 191. Hildan. obſ. cent. 3. obſ. 58.

autem

autem in hoc morbo motu leviſſimo fatiſcunt vires, unde incommodi plus quam fructus accipiunt. Hoc ergo in primis indagandum, priuſquam porrigantur emetica aegris hujuſmodi.

59. Nihil etenim ex omni parte perfectum atque beatum: Sua ſecum trahunt commoda, et etiam incommoda, vomitoria; nec minus verenda haec, quam appetenda iſta, ſi forte infelici auſpice porrigantur. Infauſti autem eventus remedii utilitatem haud minus praedicant quam effectus optabiliores; inſitam ejus vim demonſtrant, efficaciam probant, dum porrigentis imperitiam vel temeritatem redarguunt, nec hominis excidii reum habendum eſt medicamen, ſed manus quae inepte vel intempeſtive miniſtrant. Quamvis autem, ex tradita de emeticis doctrina, facile perito patere poſſit, in quibus caſibus utilia, in quibus nociva ſint; haud tamen alienum eſt, ut brevi horum morborum enarratione claudatur diſſertatio, in quibus vomitus imprimis vitandus.

1*mo*, Nativa corporis ſtructura apud nonnullos * ſcriptores cauſa exſtat, quo minus quibuſdam propinentur emetica; quibus habitus macer et gracilis, collum extenſius, pectus anguſtum, atque ad vomendum difficultas; quibus denique ſanguinis ſputum, animi deliquium, tuſſis moleſta, familiaria fuere, ab emeticis liberati ſunt: Qui vero contraria temperie praediti

* Vide Fallopium de purgant. p. 81.

ſunt

ſunt, horum uſum ſalutarem ex conſulto medicorum ſaepe ſunt experti. In vehementiorum uſu haec ſane perpendenda ſunt, ne forſan temeritatis vel incuriae poenas luamus; nec in leniori vomitu praecipiendo penitus omittenda. Idioſyncraſia quaedam, experientia aegroto cognita, at a medico, niſi ab ipſa didicerit, nunquam detegenda, hujus vel illius medicaminis uſum vetaret, quod aliter ab ignaro porrectum multa mala eſt pariturum.

2*do*, In morbis inflammatoriis, ubi ſanguis aduſto lentore inquinatur, immeabilis in arteriarum finibus ſiſtitur, neque vi propellendus; ut in febribus acutis, inflammationibus topicis, pleuritide, phrenitide, hepatitide, aliiſque ejuſmodi; vires vitae minuendae potius quam provehendae: Ergo, peracta acceſſione, urgente ſaeviſſimo dolore, tutum non erit emeticum.

3*tio*, Neque, ſi multum laedatur viſceris, ſive partis alicujus actio, quae tonica dicitur, ſive aequilibrata potentia, qua ſolida fluidis reniti deberet, minuatur, emetici fortioris vim mochlicam experiri licet, antequam ratio partis habita ſit, an tantae vehementiae impetum commode ferat, vel incommodi majoris fiat particeps. Sic, v. g. in hydrope abdominali exſiccat emeticum, ſed tumorem pro aliquo ſaltem tempore extendit.

4*to*, In pulmones emeticorum vis ſane ingens eſt, quia niſu vomitorio tam ſubito per eos dimittitur ſanguinis inaſſueta moles, qua diſtenduntur vaſa, comprimuntur veſiculae, quibus

fortiter reagens intra detentus aër, preſſuram validam longe validiorem reddit; et, ſi dehiſcentia prius vaſa ſanguinem effuderint, vulnuſcula certo certius ampliata haemoptoen augebunt. Quin et in incipiente haemoptoe, ab externa cauſa producta, dum ſanguis adhuc blandus, nec ſordida tabe contaminatus, vix fere ad emeticum licet confugere, quo e veſiculis pulmonicis excutiatur latens cruor, qui, ſtagnando corruptus, morbum, alioqui haud periculoſiſſimum, intenderet. Pulmonicis igitur vix porrigenda ſunt, niſi puris inundatio pulmones obruat, et lethum a ſuffocante materia, aliàs inevitabile, adfuturum ſit.

5*to*, Denique, cavendum eſt ab horum uſu in eis morbis, qui pro cauſis agnoſcunt ſanguinem multum craſſum, pituitam valde tenacem, copioſam, pene immobilem, aliamve quamcunque hujuſmodi materiem, cerebrum et nervorum fontem gravantem, ut gravior apoplexiae, paraplegiae, hemiplegiae ſpecies, veternus, carus, et ejuſmodi. Altius enim morbum plerumque figunt, vel in ipſa forte operatione hominem interimunt. Vix ab eorum uſu dehortatione opus eſt, licet aliqua ſymptomata ea neceſſaria eſſe alioquin innuerent, quando imminet adhuc haemorrhagiae metus, poſt vulnerata aut detruncata membra; vel denique quando per ampliores abſceſſus, aut aliud quodcunque oſtium, apertus paratur exitus, per quem facto ingenti impetu emanet cum vita cruor.

II. *Remarks on the Neutral* Salts *of* Plants, *and on* Terra foliata Tartari *.

CHEMISTS, who prepare the lixivial Salts of Vegetables, generally take care, by the means of hot water, and ſometimes repeated affuſions of it, to get every thing out of the aſhes that is ſoluble; and when they evaporate this ſolution, they employ the Salt which is obtained from it as a pure alcali in other operations, either not knowing or neglecting the Neutral Salt, which Boerhaave ſays †, is mixed with it, and is *ſui generis*. In an operation which I was lately employed in, the neceſſity of conſidering the effects of this Neutral Salt was evident, and I could determine the genus to which the greater part of it belonged.

An ingenious Chemiſt of my acquaintance, intending to make a large quantity of *Terra*

* From Medical Eſſays and Obſervations, publiſhed by a Society in Edinburgh, Vol. V. Part I.

† Chem. Proc. 14.

foliata Tartari, uſed for that purpoſe the *lixivial Salt of Fern*, carefully made in the country by a perſon well ſkilled in practical chemiſtry, careful and exact. Some of this Salt was fluxed, the reſt was a clean lixivial Salt; each kind was ſaturated by itſelf with ſtrong diſtilled vinegar, eight or nine times the weight of the Salt being ſufficient of the vinegar to fully ſaturate the alcali of both parcels; whereas uſually fourteen or fifteen times the weight of the Salt is requiſite of the vinegar to make a perfect ſaturation.

The ſaturated liquors being filtrated, and carefully evaporated to a mellaginous conſiſtence, hiſſed and crackled where it hardened on the ſides of the veſſel, and did more ſo the nearer they came to dryneſs, ſhewing hardly any marks of a diſpoſition to flow, which commonly happens when the ſaline liquor is ſo far evaporated.

No methods which the operator, who is a very expert artiſt, could then fall upon, ſerved to make the proceſs ſucceed.

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The Chemiſt having informed me of the caſe, we could diſcover no fault in the materials, veſſels, or operation; but ſuſpecting the Neutral Salt to be the cauſe of the proceſs not ſucceeding, we diſſolved all the refractory maſs in warm water, ſet it to cool, and had a conſiderable quantity of neutral cryſtals, ſeveral of them exactly reſembling thoſe cryſtals delineated in Tab. I. of your Vol. I. which were procured by Dr. Plummer from *Moffat* water; only ours were more perfect, which was owing probably to the large quantities of materials we had. Moſt of the cryſtals were cubical, which joined differently, and mixed with other Salts, made a ſurpriſing variety of figures, which cannot well be deſcribed in words; but I have ſent ſome of them of different ſhapes in a box. It was plain from their figure and taſte, and by experiment, that common *Sal marinum* made up a great part of what we had; the reſt might not unjuſtly be called partly a *Sal Polychreſt*, partly the eſſential Salt of the plant.

We were obliged to repeat this operation for obtaining thoſe cryſtals, before we could obtain a Salt which flowed and foliated; the cryſtals depoſited each time were more bitter and more pungent, though in form reſembling the firſt we got; the *Terra foliata* did not flow nor foliate ſo freely, nor were the foliations ſo large or ſo white as uſual.

It is with reaſon then that Boerhaave orders * a *Sal Alcali puriſſimum* to be uſed in the preparation of *Tartarus regeneratus*, or *Terra foliata Tartari*; and the Diſpenſatories which order *Sal Tartari*, direct the Chemiſts to more certain proceſs than when they are left at liberty to employ what they will. The Chemiſts in Town here moſtly uſe the *cineres clavellati* in this proceſs, and ſucceed very well, or make the Salt with large foliations and white; and perhaps this is the only one of all the neutral ſaponaceous Salts, which is more efficacious the whiter and purer it is.

* Chem. Proc. 67.

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The principal reaſon why Chemiſts ſucceed better in making *Terra foliata Tartari* with *cineres clavellati*, than with any other of the lixivial Salts, ſeems to be, becauſe thoſe who prepare the *Potaſh* content themſelves with letting cold water run thro' large tubes or vats filled with aſhes, till it has waſhed ſo much from them as to make a *lixivium* ſupport an egg; by which operation, little of the Neutral Salts are diſſolved to mix with the *lixivium*; and probably in drying the *lixivium*, what of the Neutral Salt is in it, is forced by the fire to the ſurface, to form that cruſt which it takes in burning the ſtraw that is wetted with it.

That the aſhes which remain after the *pot-aſhes* or Salts are extracted, contain much of the Neutral Salt, is evident from their ſerving ſo well the purpoſes of agriculture, being preferable to ſea-ſalt for all ſuch purpoſes.

How ſuch a quantity of ſea-ſalt ſhould be contained in vegetables, is an enquiry foreign

to your deſign, and therefore I ſhall not mention my opinion of this phænomenon: I believe it will not, however, be unneceſſary to remark, that Phyſicians ought to conſider, that the proportion of this Neutral Salt, mixed in alcaline ones, is often different; the more is thus mixed, the leſs acid is required to ſaturate a given quantity: Hence it frequently happens, that the medicine we intend ſhould be perfectly neutral, is very acid, and entirely diſappoints our expectations *.

* It is common here to preſcribe one ſcruple of Sal Abſinth. to half an ounce of Succ. Limon. To learn how far this proportion was juſt, I procured ſix parcels of Salt of Wormwood, and ſix of Salt of Tartar, from ſhops in different parts of the Town: I procured likewiſe a quantity of lemon juice, ſufficient for all the trials I intended. Half an ounce of this juice was ſaturated with 18 grains of one of theſe parcels, and required 32 of another to reduce it to the ſame degree of neutrality. This difference was owing to the Neutral Salt contained in the laſt, which was really procured from Wormwood aſhes, and carefully lixiviated with hot water.

The ſpecimens of Salt Tartar were more alike; they varied only from 18 or 19 grains to 23 or 24. The freſh Salt of Tartar is a pure alcaline Salt; if it is expoſed to the air, it abſorbs the acid contained in it, and thus becomes neutral in proportion to the time it has been kept, or as it has been expoſed to the air.

Wherefore, in directing the common ſaline draughts, it would ſeem that 24 grains is a much more ſuitable proportion than

With reſpect to the proceſs for making the *regenerated Tartar*, it may not perhaps be without ſome uſe to obſerve, that the more vinegar is put to it, the *foliations* will appear larger and whiter, though it is the more expenſive, becauſe whatever vinegar is beſtowed on it, the operator muſt expect very little more Salt than the weight of the alcali made uſe of.

The addition of ſome more than the ordinary proportion of vinegar not only contributes to render the Salt finer, as by repeated trials we found it did, but alſo prevents it from becoming too alcaline; for was it to be brought to an exact *punctum ſaturationis* before it is committed to the fire, the heat neceſſary to evaporate the liquor and flux the maſs would render it more of an alcaline corroſive, than of a neutral ſaponaceous nature. This induced me to remark, that its whiteneſs may be eſteemed as a mark of its

than one ſcruple; and if to this mixture we add a ſcruple of ſome abſorbent, as crab's eyes, &c. we ſhall probably have a mixture more perfectly neutral, than we ſhall be able in common to obtain by any other method of preſcribing.

goodneſs; it arguing that a proper quantity of vinegar has been uſed, and it may be rendered whiter and more pure by repeating the diſſolution, evaporation, and fluxion.

The *Tartarus regeneratus* taken from the quantity of half a drachm to two drachms, is an excellent alterative and diuretic; and from three to ſix drachms is a very mild cathartic, that never ſinks the ſpirits, or raiſes any violent diſorder, and particularly is ſerviceable to ſeveral dropſical patients: of its ſervice this way allow me to mention one hiſtory.

A Married Gentlewoman, 48 years old, childleſs, a little corpulent, was repeatedly affected with an immoderate diſcharge of the *menſes*; ſoon after her belly began to ſwell, her legs grew œdematous, all the ſymptoms of a dropſy appeared. She was treated with the ſtrong and gentler cathartics, diuretics, aperients, and corroborants; but this bad circumſtance always attended evacuants either by ſtool or urine, that they never failed

to

to produce a diſcharge of blood from the *vagina*, which ſunk her prodigiouſly. Corroborants, eſpecially of the aſtringent kind, ſoon ſtopt the flux; but at the ſame time, contributed to encreaſe the ſwelling, by leſſening the diſcharge by urine and ſtool. She then began to take three drachms of the *Terra foliata Tartari* once or twice a-week; it gave her two or three ſtools, with a large evacuation of urine, without exciting the menſtrual diſcharge, or affecting her ſtrength: ſhe continued the uſe of it for upwards of a year, without encreaſing the doſe, or attempting any other relief than what that gave her, which was very great. Whether it would have made a complete cure, I cannot ſay; for having taken a rough purgative, ſhe had her days ſhortened by it.

III. *Eſſay upon the Origin of* Amber *.

AFTER all that has been wrote upon the ſubject of Amber, its origin is yet, in a great meaſure, unknown. Several ingenious men have ſearched into this affair upon the ſpot where the Amber is principally gathered: They have related their obſervations with great candour; they have given us the concluſions they drew from the facts they diſcovered; yet without ſatisfying us entirely about many particulars.

But as a knowledge of the nature of things can only be acquired from the things themſelves, I have carefully collected every material fact I could meet with from thoſe who were beſt acquainted with the natural hiſtory of this ſubject, and whoſe induſtry and accurateneſs in obſerving, and good faith in relating their obſervations, have been generally eſteemed unexceptionable. Of theſe I ſhall only mention *Wigandus*, *Hartman*, and *Sendelius*,

* From the Philoſophical Tranſactions, No. 472.

the

the laſt who has wrote, as far as I know, profeſſedly upon this ſubject.

The evidence which theſe Gentlemen afford us I have endeavoured to throw together, in the moſt natural order I could, without reſpect to any hypotheſis: but as this enumeration of facts admits of no abridgement, my papers would take up too much room in your memoirs, therefore I can only refer to the Eſſay itſelf. Upon this foundation of facts is built a diſcuſſion of the following problems:

1. Whether Amber is not ſtrictly a marine production; or is reduced by ſome quality of the ſea-water into the condition we find it in? Or,

2. Whether it is not to be conſidered only as a bituminous body, generated in the bowels of the earth? Or, laſtly,

3. Whether it is not, in its origin, a vegetable production, a reſin; but changed into its preſent form by a mineral acid?

It will only be neceſſary, in this place, to mention, that, after having ſhewn the difficulty of maintaining the two firſt, I have undertaken to ſupport the laſt of theſe opinions.

I endeavour to make it appear, that Amber was, in its origin, a vegetable reſin; the product, perhaps, of the fir or pine kind; by conſidering the appearance of the ſubſtance itſelf: and that though it has ſome diſtinguiſhing properties, yet it has many others, which are common to an indurated reſin. Its aſpect, its texture, its form, are arguments for this. The bodies which it is known to incloſe are urged as proofs, that this incluſion could not happen in the ſea, nor in the earth, but upon its ſurface; as the included objects are moſtly animals, moſtly volatiles too; very few reptiles, except ſuch as are often found aloft in trees, as ants, ſpiders, &c. and ſcarcely ever any aquatics, are found in amber. And, I believe, I may challenge all the cabinets of the curious to produce one inſtance of a marine body having been found naturally incloſed

in Amber. That there are ſeveral fictitious ones is granted.

That this reſin with the trees which afforded it were buried in the earth by the deluge, or by ſome ſuch violent renverſement, and there conſtitute the proper veins of Amber, I likewiſe endeavour to make appear, from the ſame evidence of facts. The ſubſtance of which theſe veins conſiſt hath ſeveral genuine characteriſtics of wood ſtill remaining. The texture of this ſubſtance is often an undoubted proof of what it hath been; being fibrous, and, when dried, ſwims in water, and burns like other wood. The amber is not diſpoſed in theſe veins in one continued *ſtratum*; but lumps of it are irregularly diſſeminated through the whole of what I call the woody maſs.

A difficulty, which naturally offers itſelf in this place, is attempted to be removed: What proof have we that this, which is called wood, is not mere foſſil wood, the product of creating power, exerted in the place where it is now found? It is anſwered, that as there

there are undoubted proofs, that many ſubſtances now occur, where they were not originally framed, we are under no greater difficulty in accounting for the change of place in one than the other. It is known that the *exuviæ* of fiſhes are ſometimes found on the tops of the higheſt mountains. The bones of large animals are met with at prodigious depths, where nature never formed, nor art conveyed them. Whole woods are found under-ground. The cauſe that effected theſe was capable of the other.

Yet, allowing theſe allegations to be juſt, by what cauſes is this change produced? It is urged, that time is one of the cauſes; and that the reſt is completed by the acid of the earth, a vitriolic mineral acid. It is proved, from the facts above-mentioned, that ſuch an acid is preſent wherever Amber occurs in its *proper matrix:* that it is ſometimes found in the Amber itſelf, in its genuine appearance; that the acid of the ſalt of Amber appears, from experiments, to be vitriolic; that common turpentine (a known vegetable reſin) affords, by proper management

ment with a vitriolic acid, a conſiderable portion of the ſame chemical principles that Amber does; that thoſe pieces of Amber, which have been found ſoft and imperfect, are nearly related to a vegetable reſin: in ſhort, it is endeavoured to be proved, that we have the ingredients of Amber in our power, and that nothing is wanting but a ſucceſsful application of them to each other; at leaſt to procure the medicinal preparations of Amber at an eaſy expence. Time and repeated trials may, perhaps, ripen this beginning, in ſomebody's hands, into an happy uſeful imitation of this valuable ſubſtance.

This account is concluded with an enquiry into the medical virtues of Amber, and ſome of its principal preparations. It is obſerved, that a ſubſtance of ſo firm a texture, as ſcarce to yield to any common *menſtruum*, is not likely to produce any conſiderable effects upon the human body; and that, indeed, there are very few genuine inſtances recorded of any: that buſy imagination might, probably, at firſt, introduce it, prejudice ſupport it, and engage men of parts

parts and authority to recommend it to their inattentive ſucceſſors.

I ſhall finiſh this abſtract with remarking, that were ſome of the leiſure moments of men of great abilities and experience devoted to inform the world of the inefficacy of ſuch methods and medicines as they have proved to be ſo, Phyſic would be reduced into narrower bounds; they would merit the thanks of every one in the profeſſion; and poſterity, at leaſt, would commend their endeavours.

IV. *Obſer-*

IV. *Obſervations on the* Manna Perſicum *.

IT does not appear very plain, from any thing that has occurred to me in the writings of the elder Greek phyſicians, that they were much, if at all, acquainted with any ſubſtance that now goes under the name of *Manna*. They had the term, but applied it to a ſubject very different from what we do at preſent. The Ὑποσεισμα τῦ Λιβανωτῦ or the *Micæ thuris concuſſu eliſæ*, the bits broke off from the *Olibanum* in carriage, was the ſubſtance they knew by that name.

If the *Arabians* did not firſt of all introduce ſome kind of purging *Manna* into practice, they at leaſt rendered the uſe of this drug more common and extenſive. Their country afforded ſeveral ſpecies of it; which being familiarly known, is, perhaps, the reaſon why no deſcriptions have been left ſufficiently clear, whereby to diſtinguiſh them from each other. Whoever has conſulted the Arabian writers, or the beſt of

* From the Philoſophical Tranſactions, No. 472.

their commentators, will allow that their accounts are defective.

That they had three ſorts of this drug, diſtinguiſhed by the names of *Manna*, *Tereniabin*, and *Siracoſt*, is certain; but whether theſe are now known, or by what appellations, has been very much diſputed.

Rauwolf, in his Itinerary publiſhed by Ray, and Tournefort, in his Voyage to the Levant, have given the cleareſt intimations of any writers that I know of: if to theſe we add Cluſius, we have all that we have to expect of certainty, amongſt thoſe who have mentioned it; they being eye-witneſſes of what they wrote. Yet the deſcriptions of theſe are either ſo imperfect or unknown, that a very late writer upon the *Materia Medica* *, either not having ſeen or underſtood them, has fallen into a miſtake about the *Manna Arabum*, and his authority may perhaps miſlead others.

My worthy friend Peter Collinſon, having procured a ſort of *Manna* from a Gen-

* Geoffroy Tractat. de Mat. Med. vol. 2, p. 586, &c.

tleman at Peterſburgh. under the title of *Manna Perſicum ex planta* Al-Hagi *Maurorum*, was pleaſed to favour me with a ſpecimen of it. I conſulted the principal writers on the *Materia Medica*; and finding their opinions to be frequently oppoſite, and their accounts in general perplexed, I imagined it would not be unacceptable to the curious to have ſuch a deſcription of this ſpecies as would probably make it clear, that we have one kind of the *Manna Arabum* ſtill extant, viz. the *Terniabin*, and prevent any future miſtakes about it.

The ſpecimen of *Manna* that now lies before me appears, at firſt ſight, to be a dirty reddiſh brown-coloured mixed maſs; which, upon a nearer view, is found to conſiſt of

1. A great number of globular, cryſtalline, almoſt pellucid bodies, of a yellowiſh-white colour, and different ſizes; the biggeſt not much exceeding a large coriander-ſeed, or a very ſmall pea.

They differ from grains of Maſtich, in being more upon the reddiſh caſt; but in figure and tranſparency it varies not much.

2. Some ſmall ſticks like prickles, and others like footſtalks of leaves or fruit.

3. A few narrow-pointed firm ſmall leaves.

4. A large quantity of long reddiſh-coloured pods, of a ſweetiſh gelatinous taſte, containing from one to ſix or ſeven hard, irregular, ſomewhat kidney-like ſeeds, which to the taſte are very acerb. And,

5. Some ſand and earth. Four ounces of the *Manna*, diſſolved in warm water, left one ounce or ſomething more of theſe in the filtre.

The globules (No. 1.) are hard, and break between the teeth like ſugar-candy; they are of a pleaſant ſweet taſte, with much leſs of the *Manna* reliſh than the Calabrian; but with enough to diſcover to what family this ſubſtance belongs.

The

The ſticks, leaves, pods, &c. ſeem to be parts of the plant that produces the *Manna*. Some of the ſeeds have been ſown, and proved ſo freſh as to afford ſome plants of the *Alhagi*.

About the year 1537, when Rauwolf wrote his Itinerary, it appears, that large quantities of this kind of *Manna* were brought from Perſia to Aleppo, where it was then known under the name of *Trunſchibil* or *Trunſchibin*; a corruption, doubtleſs, of the antient *Terenjabin*; or, as it ought to be wrote, according to Deuſingius*, *Terengjabim*.

Rauwolf informs us, that this ſpecies of *Manna* was gathered from the *Alhagi*; a plant which is minutely deſcribed by Tournefort †, who alſo confirms the account which Rauwolf had long before given, with the following particulars:

" It is chiefly (ſays he) about Tauris, a " city in Perſia, that it is gathered, under

* Deuſingius Tract. de Manna & Sacch. p. 11.

† Tournefort's Voyage to the Levant, vol. 1. p. 247, 248.

" the name of *Trungibin* or *Terenjabin*, men-
" tioned by Avicenna and Serapion. Thoſe
" authors thought it fell upon certain prickly
" ſhrubs; whereas it is only the nutritious
" juice of the plant."---He adds, " that,
" during the great heats, you perceive ſmall
" drops of honey upon the leaves and branch-
" es of theſe ſhrubs; theſe drops harden,
" in grains about the bigneſs of coriander-
" ſeeds: they gather thoſe of the *Alhagi*,
" and make them into reddiſh cakes full of
" duſt and leaves, which alter the colour,
" and leſſen its virtue. This *Manna* is much
" inferior to the Italian. The ordinary doſe
" is from 25 to 30 drams."

Cluſius * informs us, that the *Terniabin* of the modern Arabs is gathered from a prickly ſhrub, ſuch as the *Alhagi* is deſcribed to be. Avicenna †, according to his preſent tranſlation, tells us, that the *Tereniabin* falls *ſuper lapides*; but ‖ Deuſingius ſays, that it ought to be read *ſuper Alhagi*; and

* Cluſ. Exotic. vol. 2. p. 164.
† Avicen. Oper. tom. 1. p. 404.
‖ Tract. de Manna, p. 19.

that

that his tranſlators were led into this miſtake from the reſemblance betwixt *Al-Hhagier* (the word in the Arabic text, and which ſignifies a kind of thorny plant, ſuch as the *Alhagi* is ſaid to be) to *Al-Hagio*.

It is therefore evident, that the *Manna Perſicum*, now before us, is the *Tereniabin*, *Terenjabin*, *Terræjenbin*, or more properly the *Terengjabin*, of the old Arabians, and of Cluſius; the *Trungibin*, or *Trunſchibil*, of the latter, of Rauwolf and Tournefort; very probably the *Manna Maſtichina orientalis* of Matthiolus and Bauhine; as it is the *Maſtichina* and *Alhagina* of Geoffroy; tho' this author makes the *Tereniabin* a ſpecies of *Liquid Manna* *, in complaiſance to his countryman Bellonius; who, tho' in general a diligent obſerver, yet, in this caſe, was miſled by the Caloyers, or Monks of Mount Sinai.

Bellonius ſays, in his Obſervations †, and more largely in his Treatiſe *de Arboribus*

* Tract. de Mat. Med. tom. 2. p. 587

† Bellonii Obſerv. apud Cluſ. p. 129.

perpetua fronde virentibus, that theſe Caloyers collect a kind of liquid *Manna*, which they call *Tereniabin*; that this ſpecies was known in the ſhops at Cairo by the ſame name; and that this is the *Mel roſcidum* of Galen, and the *Mel cedrinum* of Hippocrates.

I think it is very plain, that Bellonius was miſtaken in the firſt part of his aſſertion, from what has already been advanced. The Caloyers told him, that they called it *Tereniabin*; and he takes it for granted, that it was the *Tereniabin* of the old Arabians, contrary to their own accounts ſupported by the teſtimony of their ſucceſſors, who are known to vary as little as any people whatever from the traditions and cuſtoms of their predeceſſors, and ſtill retain a great many of their appellations. For proof of this, I need only refer to the accounts which Rauwolf, Tournefort, and Dr. Shaw, give us of thoſe people.

That this liquid *Manna* was the Δροσόμελι *ſeu* Αερόμελι of Galen*, and the Μέλι κέδρινον of

* Galen. de Alem. Facult. l. 3. c. 39.

Hippo-

Hippocrates ‡, (ſuppoſing there is no miſtake in the text), ſeems very probable. The deſcription which Galen has left of the *Mel roſcidum*, and the manner of collecting it on Mount Sinai in his time, tallies exactly with Bellonius's account; and thus far, I believe, all authors agree: but that the virtues of *Manna* were known ſo early as in the times of theſe two authors will be difficult to prove,

Galen takes notice of this *Mel roſcidum* more as a curioſity than a medicine. He no where, that I know of, mentions its uſe, or deſcribes its qualities. He introduces the account of it with a *Memini aliquando*, and ſays, that the *Mel roſcidum* was rarely met with in his country, but was gathered at Mount Sinai every year: and, indeed, from the manner in which it is ſpoken of by an old Greek writer in Athæneus, as cited by Salmaſius, it would ſeem that it was only uſed for pleaſure, as an agreeable ſweet, *Melle ipſo ſuavius*; and probably continued

‡ Hippocrat. de Ulceribus, p. 876. Edit. Foeſii.

to

to be of no other uſe. Meſue tells us *, that Galen mixed *Manna* with *Scammony*. In the ſpurious piece *de Dynamiis*, aſcribed to Galen, *Scammony* is ordered to be mixed with honey; but he never once mentions *Manna* in any of his extant writings. As Galen is known to be very minute in his account of the *Materia Medica* of that time, his ſilence is a ſtrong argument againſt the ſuppoſition, that even the *Mel roſcidum* was in pharmaceutic uſe, much leſs any other ſpecies of *Manna*.

If Galen was unacquainted with this ſubſtance, it is very probable that Hippocrates was ſo likewiſe; ſince a drug that muſt have made a conſiderable figure in his *Materia Medica*, would not have ſoon been ſtruck off the liſt, or dropped into oblivion and diſuſe.

But how ſhall we get rid of the Μέλι κέδρινον; the name ſufficiently intimating what ſubſtance was intended? Perhaps Foeſius's ſuggeſtion may help us. He thinks,

* Meſue de Simpl. c. 8.

that

that the words might have been read with a comma intervening, whereby we ſhould have had two diſtinct well-known ſubſtances, honey, and the reſin of the cedar; two ſimples that were then, and continued long after, in familiar uſe; inſtead of one, which he mentions no where elſe, and ſeems to be unknown ſome ages after.

Upon the whole, I have not hitherto met with evidence ſufficient to induce me to believe, that either the *Mel roſcidum*, or any kind of *Manna*, was in common medical uſe either with Hippocrates or Galen. Actuarius mentions it once †, and, as I know of, only once: he makes it a purgative, and to be ſomewhat ſtronger than *Caſſia*.

It is now pretty generally known, that the *Mannas* in uſe are not a *Mel aerium*, or honey-dew, as was long believed, but a *Succus proprius* iſſuing out of ſome particular trees, at proper ſeaſons, and in ſome climates only; and that, during the ſummer's heats, a great number of vegetables, in al-

† Actuar. Method. Medend. l. 5. c. 8.

moſt

moſt all the temperate countries, afford a juice ſomewhat a-kin to Manna, from whence the Bee collects and prepares her honey. It may not, however, be amiſs, nor very foreign to our ſubject, to exhibit a ſhort account how the *Manna Officinarum* is collected.

In Calabria and Sicily, in the hotteſt part of the ſummer-months, the *Manna* oozes out of the leaves, and from the bark of the trunk, and larger branches, of the *Fraxinus*, or Calabrian aſh. The *Ornus* likewiſe affords it, but from the trunk and larger branches only, and that chiefly from artificial apertures; whereas it flows from the *Fraxinus* thro' every little cranny, and burſts thro' the large pores ſpontaneouſly.

What is got from different parts of the tree acquires different names; the trunks generally afford thoſe large white pieces to which we give the name of flaky; but the fineſt of all is ſuch as is collected from artificial inciſions, in which little ſtraws, &c. are purpoſely placed in ſuch a manner, as that the

the flowing juice may concrete upon them, and form thoſe long, white, cylindrical, perforated, pieces which are ſo much valued.

This juice is ſecreted in the largeſt quantity betwixt noon and evening. In the night it is condenſed, if the ſeaſon is dry, otherwiſe the *Manna* is ſpoiled: They ſcrape off the ſmall with wooden knives, early in the morning, and gather the larger flakes; both which are afterwards dried upon clean paper in the ſun, till they ſtick no longer to the fingers; and the different ſorts are then carefully packed up for uſe and exportation.

V. *Obſer-*

IV. *Obſervations on a Caſe publiſhed in the laſt Volume of the* Medical Eſſays, *&c. of* recovering *a Man* dead *in appearance, by diſtending the* Lungs *with Air. Printed at* Edinburgh, 1744 *.

THERE are ſome facts, which in themſelves are of ſo great importance to mankind, or which may lead to ſuch uſeful diſcoveries, that it would ſeem to be the duty of every one, under whoſe notice they fall, to render them as extenſively public as it is poſſible.

The Caſe which gives riſe to the following remarks, I apprehend, is of this nature. It is an account of "A man, dead in appear-"ance, recovered by diſtending the lungs "with air; by Mr. William Toſſack, Sur-"geon in Alloa;" printed in Part II. p. 605. Vol. V. of the Medical Eſſays, publiſhed by a Society of Gentlemen at Edinburgh; an abſtract of which will be ſufficient in this

* From the Philoſophical Tranſactions, No. 475.

place:

place: thoſe who deſire an ampler account may conſult the article itſelf.

A perſon ſuffocated by the nauſeous ſteam ariſing from coals ſet on fire in the pit, fell down as dead; he lay in the pit "between "half an hour and three quarters, and was "then dragged up; his eyes ſtaring and open, "his mouth gaping wide, his ſkin cold; not "the leaſt pulſe in either heart or arteries, "and not the leaſt breathing to be obſerved."

In theſe circumſtances, the Surgeon, who relates the affair, "applied his mouth cloſe "to the patient's, and, by blowing ſtrongly, "holding the noſtrils at the ſame time, raiſed "his cheſt fully by his breath. The Surgeon "immediately felt ſix or ſeven very quick "beats of the heart; the thorax continued "to play, and the pulſe was ſoon after felt in "the arteries. He then opened a vein in his "arm; which, after giving a ſmall jet, ſent "out the blood in drops only for a quarter of "an hour, and then he bled freely. In the "mean time, he cauſed him to be pulled, "puſhed, and rubbed, as much as he could.

In

"In one hour the patient began to come to "himſelf; within four hours he walked "home; and in as many days returned to "his work."

There were many hundred people, ſome of them of diſtinction, preſent at the time.

This is the ſubſtance of the account; from whence it naturally appears how much ought to be attributed to the ſagacity of the Surgeon in the recovery of this perſon. Anatomiſts, it is true, have long known, that an artificial inflation of the lungs of a dead or dying animal will put the heart in motion, and continue it ſo for ſome time; yet this is the firſt inſtance I remember to have met with, wherein the experiment was applied to the happy purpoſe of reſcuing life from ſuch imminent danger.

Bleeding has hitherto been almoſt the only refuge upon theſe occaſions: if this did not ſucceed, the patient was given up. By bleeding, it was propoſed to give vent to the ſtagnating

nating blood in the vein, in order to make way for that in the arteries *à tergo*, that the reſiſtance of the heart being thus diminiſhed, this muſcle might again be put in motion.

But, in too many inſtances, we every day are informed, that this operation will not ſucceed, though the aperture is made with never ſo much ſkill: nor is it likely that it ſhould, when the blood has loſt conſiderably of its fluidity, the motion of the heart, and the contractile force of the ſolids, are at an end.

Chafing, rubbing, pulling, the application of ſtimulants, are too often as ineffectual as bleeding.

The method of diſtending the lungs of perſons, dead in appearance, having been tried with ſuch ſucceſs in one inſtance, gives juſt reaſon to expect, that it may be uſeful to others.

It may be a proper enquiry, In what caſes, and under what circumſtances, there may be a proſpect of applying it with ſucceſs?

It will at once be granted, that when the juices are corrupted, where they are rendered unfit for circulation by diſeaſes, where they are exhauſted, or where the tone and texture of the ſolids is injured or deſtroyed, it would be extreme folly to think of any expedient to recover life.

But where the ſolids are whole, and their tone unimpaired by diſeaſes, the juices not vitiated by any other cauſe than a ſhort ſtagnation; where there is the leaſt remains of animal heat, it would ſeem wrong not to attempt ſo eaſy an experiment.

This deſcription takes in a few diſeaſes, but a greater number of accidents. Amongſt the firſt are many of thoſe which are called ſudden deaths from ſome inviſible cauſe; apoplexies, fits of various kinds, as hyſterics, ſyncope's, and many other diſorders, wherein, without any obvious pre-indiſpoſition, perſons in a moment ſink down and expire. In many of theſe caſes it might be of uſe to apply this method; yet without neglecting any of thoſe other helps, which are uſually called in upon theſe melancholy occaſions.

It

It is not eaſy to enumerate all the various caſualties, in which this method might be tried not without a proſpect of ſucceſs; ſome of them are the following:—Suffocations from the ſulphureous damps of mines, coal-pits, &c. the condenſed air of long unopened wells, or other ſubterraneous caverns; the noxious vapours ariſing from fermenting liquors received from a narrow vent; the ſteam of burning charcoal; ſulphureous mineral acids; arſenical effluvia, &c.

Perhaps thoſe, who, to appearance, are ſtruck dead by lightning, or any violent agitation of the paſſions, as joy, fear, ſurprize, &c. might frequently be recovered by this ſimple proceſs of ſtrongly blowing into the lungs, and by that means once more communicating motion to the vital organs.

Malefactors executed at the gallows would afford opportunities of diſcovering how far this method might be ſucceſsful in relieving ſuch as may have unhappily become their own executioners, by hanging themſelves. It might at leaſt be tried, if, after the criminals

minals have hung the uſual time, inflating the lungs in the manner propoſed, would not ſometimes bring them to life. The only ill conſequence that could accrue from a diſcovery of this kind would be eaſily obviated, by prolonging the preſent allotted time of ſuſpenſion.

But this method would ſeem to promiſe very much in aſſiſting thoſe who have been ſuffocated in the water, under the abovementioned circumſtances; at leaſt, it appears neceſſary to recommend a trial of it, after the body has been diſcharged of the water admitted into it, by placing it in a proper poſition, the head downwards, * prone, and, if it can be, acroſs a barrel, hogſhead, or ſome ſuch like convex ſupport, with the utmoſt expedition.

* [Since the time at which this paper was originally published, the method of treatment in caſes of this ſort has been greatly improved, and the practice here recommended of placing the body acroſs a barrel, or with the head hanging downwards, is now deſervedly exploded, the rule being to keep it in as eaſy and natural a poſition as poſſible. EDITOR.]

It does not ſeem abſurd, to compare the animal machine to a clock; let the wheels whereof be in never ſo good order, the mechaniſm complete in every part, and wound up to the full pitch, yet, without ſome impulſe communicated to the pendulum, the whole continues motionleſs.

Thus, in the accidents deſcribed, the ſolids are ſuppoſed to be whole and elaſtic, the juices in ſufficient quantities, their qualities no otherwiſe vitiated than by a ſhort ſtagnation, from the quieſcence of that moving ſomething which enables matter in animated bodies to overcome the reſiſtance of the medium it acts in.

Inflating the lungs, and by this means communicating motion to the heart, like giving the firſt vibration to a pendulum, may poſſibly, in many caſes, enable this ſomething to reſume the government of the fabric, and actuate its organs afreſh, till another unavoidable neceſſity puts a ſtop to it entirely.

It has been ſuggeſted to me by ſome of my acquaintance, that a pair of bellows might poſſibly be applied with more advantage in theſe caſes, than the blaſt of a man's mouth; but if any perſon can be got to try the charitable experiment by blowing, it would ſeem preferable to the other. 1ſt. As the bellows may not be at hand. 2dly, As the lungs of one man may bear, without injury, as great a force as thoſe of another man can exert; which by the bellows cannot always be determined. 3dly, The warmth and moiſture of the breath would be more likely to promote the circulation, than the chilling air forced out of a pair of bellows.

To conclude, as I apprehend the method above deſcribed may conduce to the ſaving a great many lives, as it is practicable by every one who happens to be preſent at the accident, without loſs of time, without expence, with little trouble, and leſs ſkill; and as it is, perhaps, the only expedient of which it can be juſtly ſaid, that it may poſſibly do great good, but cannot do harm; I thought it of ſo much conſequence to the public, as

to deſerve to be recommended in this manner to your notice. For though it is already publiſhed in a work which is generally read by the Faculty; yet, perhaps, it may be overlooked by ſome, forgot by others, and perhaps, after all the care that can be taken, it may never come to the knowledge of a tenth of thoſe who ought not to be ignorant of it.

P. S. As the repreſentation of an extraordinary fact may perhaps induce ſome to try the experiment, when occaſions like thoſe which are ſpecified in the above remarks occur, it is hoped, that humanity will prompt all ſuch to favour the Public with an account of their ſucceſs, with the principal circumſtances that attended. And as the writer of theſe remarks has embarked in the deſign of rendering this fact diffuſively known, he would be glad to have it in his power to inform the Public, that numerous experiments confirm what this caſe ſuggeſts, viz. the poſſibility of ſaving a great many lives, without riſking any thing.

V. *De Diaphragmate fisso, & mutatis quorundam Viscerum Sedibus, in Cadavere Puellæ decem Mensium observatis, Epistola*.*

RICHARDO MEAD
JOANNES FOTHERGILL, S.

QUUM non ita pridem de casu quodam, ut mihi videbatur, omnino singulari, coram te verba facerem, ipse auctor eras, vir clarissime, ut integram rei historiam literis consignarem. Consilio igitur tuo morigerus opus aggressus sum; eoque lubentius, prout mihi persuasum est, id minus ingratum multis fore, si in publicum prodiret, quod tibi privatim non displicuisset. Tantum siquidem & merito ab omnibus tribuitur illius auctoritati, cui nihil antiquius, optatius nihil, quam bonis quibuscunque artibus, de civibus suis, de humano genere, optime mereri.

Quo autem clarius tota res pateſcat, ab ovo, uti dicitur, exordiri animus est, eorum omnium historiam exponens, quorum

* From the Philosophical Transactions, No. 487.

testis

teſtis eram, fide, ſimplicitate, quâ poſſim, maximâ.

Fœmina generoſa 21 circiter annorum, tam ingenio acri & vivido quam forma ſpectabilis, habitus proceri & gracilis, temperiei ad ſanguineam vergentis, firma ſatis, ut plurimum, ſanitate felix, quinto poſt conceptionem circiter menſe, primò praegnans abortum fecit.

Magno ſuo malo id ei contigit, dum in cognati villâ longe a ſuis diſſitâ hoſpitio excipitur. Proxima, re jubente, obſtetrix advocatur, quæ artis cum primis ignara, & duris tantummodo ruricolarum ilibus aſſueta, uterum tenellulae eouſque duriter tractavit, ut ex vaſis laceratis immane adeo ſanguinis profluvium exciverit, quantum ars ſiſtere non valuit, uſque demum donec graviſſima ſuperveniens *Leipopſychia* tam fluidorum motum, quam ſolidorum vim, impraeſentiarum ſuſtulit.

Tandem vero revixit, atque ita convaluit, ut *ore ac membris in pallorem albentibus, oſtentui eſſet multum vitalis ſpiritus egeſtum.*

Ex

Ex tantis autem malis vix, & ne vix quidem eluctata eſt, antequam de novo fit gravida. Miſeram vero ſortem, quâ per totum graviditatis decurſum affligatur, referre piget; graviſſima namque mala, quae uterum gerentes exercere ſolent, haec noſtram & peſſime exercuerunt.

Puellulam tamen & ſuo tempore enixa eſt, cujus ad hiſtoriam, rebus maternis feliciter compoſitis, quoad morbos, mortem, & cadaveris ſectionem, pertinuerit, referendam me accingo.

Recens natae forma culpa omni carere videbatur: parvula erat & puſilla, cujuſque cutis juſto flaccidior, & aliquatenus rugoſior, ſe ſuo nutrimento parcius potitam teſtabantur; quod nemini matris hiſtoriam penſitanti mirum videbitur.

Reſpiratio a principio ei erat juſto paullulum frequentior, pauciſque poſt diebus accedit, tanquam a correpto frigore, gravedo, cum ingenti laticis mucoſi ex ore, & oculis, & naribus profluvio, quod quoties

ubera nutricis ducere coacta eſt, fere ſpiritum infanti praecluſit. Et hinc ſaepius lachrymae, hinc etiam irae, graviores quidem quam adeo tenerae aetati contingere ſolent, quaeque ſaepius praeſentibus metum injecerunt, ne, cum furore brevi, ſimul & extremum halitum efflaret.

Commodis vero medicamentis, alvum praecipue leniter ducentibus, a gravedine utcunque liberari videbatur: viribus etiam cum mole pedetentim auctis, in ſpem adducti ſunt parentes olim delicatulae ſanitatem magis conſtantem fore.

Saepius tamen quam in pleriſque aliis infantibus ſolet, ex improviſo vomitio eam corripit: ejecta nec cibum crudum referunt, nec coctum, ſed pultem quaſi purulentam, interdum acidum, ſaepe fetidum redolentem: dejectiones etiam juſto frequentiores & ejuſdem omnino indolis erant. Reſpiratio interim frequens, laborioſa, noctuque difficillima. Haec eo magis integrae ſalutis ſpem minuebant, quo minus auſcultabant remediis, quae in hujuſmodi malis plerumque opem ferre ſolent.

Septimo

Septimo tandem circiter menſe, exanthemata quaedam ſive tubercula per faciem imprimis, deinde per collum, humeros, thoracem & ad extremos, manuum digitos, diſſeminata ſunt. Erant rotunda, pulicum inſtar morſûs lata, rubentia, duriuſcula, pruritu moleſtiſſima, ſenſim in veſiculas parvas, ſero tenui pellucido tandem repletas, elevata: quae in ſquamas furfureas tandem exſiccata, decidebant, relictis veſtigiis livido-rubellis diu permanentibus.

Haec in conſpectum venerunt paucorum poſt dierum febriculam; quum vero neque ortu, neque deceſſu juſtum aliquem typum ſervaverunt, pruriebant demum infenſiſſime, & nova ſemper ſeges demeſſam ſubſecuta eſt, diuturnum fore malum exiſtimabam, altiuſque radices egiſſe, quam quae febre inordinata eruendae forent: quumque exanthematum prorumpentium vis atque pruritus indies augeretur, ab impuro aliquo hoſpite, vitium humoribus inferente, morbum incrementa capere putabam. Ad purgantia itaque mitiſſima, acidum aut acre obtundentia, eaque quae ad viſcidum ſolvendum apta viderentur,

tur, confugi; & ne forte victûs ratio, quanquam nutrici optime, minus tamen molli alumnulae competeret, utraſque non niſi juſculis, carnibus tenerrimis, & id genus coctu facillimis alendas juſſi. Hinc tuberculorum numerus, pruritus, caeteraque mala brevi diminuta fuerunt; atque dubia hucuſque ſalus quodammodo ſtabilita.

Decimi vitae menſis initium attigerat, quum parentum juſſu nutrix parvulam ablactare ſategit. Hoc ſine magna moleſtia tulit: die ſexto, propter alvum paulo aſtrictiorem aſſuetum ſibi ſolutivum hauſit, unde bis dejecit, & bene ſe habuit.

Sub veſperam enormi vomitione corripitur, ex nulla quantum patuit cauſa oriunda, quae ſine ulla fere intermiſſione miſellam laceſſebat, donec tragoediâ per 24 horas circiter actâ, vitae brevis ſcenam clauſit.

Cuncta, quibus uſa eſt medicamenta, ſingulatim referre haud opus eſt. Tam notis pleriſque, quam novis auxiliis, intus, foras, novo & pertinaci malo obviam itum eſt.

Prae

Prae aliis per totum vitae (nam et idem erat morbi terminus) decurſum, profuerunt tinctura rhabarbari ex aqua cinamomi tenui parata, parca & ſaepius repetita doſi exhibita; & linctus ex oleo amygdalino, ſyrupo pectorali & ſapone pauciſſimo confectus. In ipſis vero extremis angoribus ad vomitum ſedandum adhibita ſunt ea quae acidum aut acre temperare, obtundere ſolent; aromata grata, mitiſſima, anodyna, demum & ipſa ſoporifera, at fruſtra omnia: alvus interea nec ſponte ſoluta eſt, neque ullis ceſſit irritamentis.

Atrocis morbi cauſas atque ſedes rimari animus erat; quod, impetrata venia, poſtridie aggredior; priuſquam vero ad diſſectionem manus admoveo, praecipuorum ſymptomatum conſpectum, quibuſcum à carceribus ad metam uſque colluctabatur, coram ſiſtere haud forte abſonum videbitur.

1. Pulſus nunquam non turbatus erat, parvulus, tremulus, frequentiſſimus.

2. Reſpiratio ſemper naturali crebrior, noctu quam interdiu difficilior.

3. Id

3. Id quoque obſervandum, quo laxior amictus, etiam interdiu, eo crebrior reſpiratio; quanto veſtis arctior thoracem & abdomen cingens, tanto erat reſpiratio naturali ſimilior.

4. Decumbenti etiam eadem actio difficilior; inde evenit, ut poſtquam primum carpſiſſet ſomnum, caetera noctis pars plerumque ſedenti in gremio nutricis abiit.

5. Tuſſis, inquietudo, febricula, plus minus, dum ad ſanitatem proxime accedere viſa eſt, noctu aderant, & ſemper quam interdiu moleſtiores.

6. Vomitiones frequentes ſine cauſa evidenti ſaepius eam fatigabant: egeſta, cruda, & varia; nunc acida, nunc putreſcentia, ſubpinguia, fetida.

7. Dejectiones ſurſum egeſtis ſimillimae.

8. Carnium quolibet modo praeparatarum odor vomitiones crudeles haud raro ciebat; tanto tamque infelici ſenſu praedita erat.

9. Quoties

9. Quoties alvus aſtrictior, toties major aderat ad vomendum proclivitas; at ventris fluxus quandoque enormis & diuturnus plus damni intulit, quam vomitio.

10. Urinam inſigni imbutam eſſe acrimonia docuit odor, ſpiritus inſtar urinoſi plerumque acris: linteamina colore flavo tingebantur.

11. Et cutis quandoque ſimili tinctura ſuffuſa eſt.

12. Humor iſte, qui pone aures infantum excerni ſolet, in noſtra etiam maxime fetidus erat.

13. Ingenium ei erat mire, placidum, & malorum patiens: ſi quando autem accenſa eſſet ira, mirum quantum excandeſceret: pari tamen celeritate extinguebatur, alioquin a ſuffocatione illico periiſſet.

Crederet, opinor, unuſquiſque rerum medicarum gnarus, ex hiſtoria jam tradita morbum eſſe inſolitum; vim ventriculi imprimis labefactatam; turbatas ſecretiones, vitiatum ſanguinem, pulmones male functos officio;

officio; forte & hepar culpa non caruiſſe. Quis vero unquam conjecturis aſſecutus eſſet diviſum fuiſſe ſeptum tranſverſum; per ejus rimam in ipſa pectoris penetralia ventriculi amplam portionem & inteſtinorum partem inſignem irrupiſſe? Haec vero & plura docuit ipſa cadaveris diſſectio, quam poſtero mane, comite H. Delanoy Pigot, chirurgo Wandſworthienſi perito, inſtitui.

Corpuſculum exſuccum, & mirum in modum unius Νυχθημέρου intervallo exinanitum luſtramus. Quoad partium formam & magnitudinem omnia recte, niſi quod thorax naturali longior videretur & anguſtior: coſtae ſiquidem, minus quam ſolent obliquè poſitae, ad corporis axin rectiùs ſpectabant.

Ilia ſiniſtra livor occupaverat, tanquam gangraena fuiſſent affecta: circa humeros & brachia haud paucae veſiculae cernebantur; quarum aliae liquore rubello, aliae virideſcenti, flaveſcenti aliae ſcatebant.

Diviſam cutem, muſculoſque tenues ſubtus jacentes tunica cellularis omni omnino adipe vacua intercurrebat.

Ventre aperto, inferior omenti margo ne vel minima facta pinguedine, vixque ad umbilicum protenſa in conſpectum venit. Inteſtinorum etiam tenuium portio, imuſque ventriculi fundus; deinde hepar magnum palleſcens; ſub cujus coſta latebat veſica fellea, ampla, turgida, fundo ſurſum, cervice deorſum rectius quam in ſanis ſolitum ſpectante. Haec forfice recluſa bilis ſpiſſae, nigricantis ferme ſeſcunciam effudit: at quanquam ex plaga patula haud ſine preſſura; uſque adeo craſſa tenaxque erat. Vicina omnia ſumma flavedine tingebantur. Ileon inteſtinum hinc inde inflammari videbatur: Colon ſuo loco abfuit: ſplen, renes, reliqua, ſana.

Reſciſſis deinde cute muſculiſque, caute ſternum ad jugulum uſque dividimus. Aſt diductis plagae marginibus, ſpectaculo, quantum novi, nunquam antea viſo, percellimur.

In

In finiſtrum quippe pectoris antrum, magna ventriculi portio ſeſe intruſerat, tam pulmonum lobos, quam ipſum pericardium, & in eo cor, ex integro abſcondens.

Diducto tandem ventriculo, quid ſubtus lateret inſpecturi, ilei partem tres circiter palmas longam; caecum, ejuſque appendicem, una cum coli portione haud parvâ, omnia uno eodemque tecta hoſpitio detegimus.

Rei novitate commotus, omnia rurſus intueor; anceps ne forte vulnus inter ſecandum diaphragmati inflictum viſceribus portam aperuiſſet. At inſpectio quam maxime accurata dubium omnino ſuſtulit; docuitque id olim fiſſum, diviſum vel perruptum fuiſſe: nam ſepti hiantis margines perfecte occalluere; neque ullibi conſpicienda erant plagae recentis indicia.

Quum itaque conſtabat nullam a nobis diaphragmati illatam fuiſſe vim, cuncta in locis quibus antea collocata erant ſtudioſe

reponimus, ſingulatim omnia et adhibita diligentia luſtraturi.

Septum tranſverſum ab oſſe ſterno, et cartilaginibus anterius diremptum, et ad centrum uſque tendinoſum, diviſum, retractumque, arcum lunatum tenſum formaverat; cujus cornua ad coſtarum fines cartilaginoſos, dextro latere ſterno propiùs, remotius ſiniſtro, pertingebant: ſicque ſinus effectus eſt inaequalis, ſiniſtro quàm dextro latere patentior.

Per hunc amplum ſinum, ſublata viſcera, in ſiniſtro thoracis angulo, inter coſtas et cordis apicem tutas adeo adepta ſunt latebras, ut neque proprio pondere, neque valida ſuccuſſione, neque mutato, quacunque demum ratione, corporis ſitu, in priſtinas ſedes unquam deduci potuiſſe judicabam: In *priſtinas* dico, quoniam primitus ante partum ſic ſita fuiſſe haud temere credendum eſt. In ipſo etenim partu malum accidiſſe, plurima ſunt quae, ut ita credam, faciunt.

Saccus ille ventriculi, qui ingeſta per oeſophagum immediate accipit, multo quam ſolet

ſolet amplior, ſuum locum obtinebat; ſolito etiam pallidior et tenuior: re liqua pars ſurſum protruſa, deinde oblique retrorſum, ſupra ſepti arcum elevabatur; in ipſo tamen tranſitu a margine ſepti anguſtatum notavimus.

Has tandem emenſus fauces in amplum ſatis utriculum rurſus excrevit; qui arcuato ſepto, tanquam ſcamno incumbens, omnem pectoris ſiniſtri ambitum ſibi vindicabat. Corculum interea, nam tale revera fuit, ſupra ipſam dorſi ſpinam detruſerat; pulmonumque lobos ejuſdem lateris eouſque coarctaverat, ut omnino ſedibus pulſos, aut nullos fuiſſe, pene crediderimus.

Pylorus ex hoc utriculo juxta tertiam coſtam emergens, et ſinuoſâ flexura deorſum vergens, in duodenum abiit; quod, qua parte ſepti jugum in deſcenſu tranſivit, et ipſum coanguſtari debuerat, quotieſcunque ventriculus aut cibis aut flatibus intumuit. Quumque ita a naturali curſu devium aberrare ne-

ceſſe habuit, nil mirum ſi ductus communis biliarius, a recto inteſtini itinere tenſus et fere connivens, ſuo ſemper munere fungi non poterat: hinc cutis, hinc urina quandoque diſcolores; et hinc ſine bile dejectiones.

Tubi inteſtinalis anfractus preſſe ſequentes iterum in thoracis antra ducimur: nam ſupra ipſum diaphragma, et pone ventriculum, portio ilei aliquot palmas longa convoluta delituit: exitum finemve quaerentibus in conſpectum venit appendix vermiformis, et caecum fecibus diſtentum, amplum, incumbente ventriculi mole compreſſum, ejuſque niſu extremo antri angulo adaptatum: denique annexa coli pars circiter dimidia, crebris et profundis ſinubus notabilis.

Qua parte colon tenſum ſepti limbum ſuperabat, id tantum non abſciſſum invenimus; nam ventriculus ſaepius repletus, cedentis inteſtini latera contra membranae renitentis marginem obſiſtens, ea ita attriverat, ſeu premendo anguſtaverat, ut ne quidem

dem fecibus craſſioribus trajiciendis aptum videbatur.

His demum attente perſpectis, caetera ejuſdem cavi contenta exquirere ſategimus; et ſub firma tectos membrana, quam mediaſtini parietem eſſe ſiniſtrum judicavimus, pulmonum lobulos detegimus, arctiſſime poſticae thoracis regioni undique non adhaerentes modo, at firmiter agnaſcentes dudum officio ſuo defuiſſe videbantur. Plexus praeterea fibrarum validus, ex membrana celluloſa quaſi contextus, totam lobulorum compagem, pleuraeque ſuperficiem ſic intercedebat, ut nulla ratione ſeipſos expandere valerent pulmones, ſi a tergo liberum movendi ſpatium permiſiſſent inteſtina et ventriculi portio.

Alterius deinde lateris cavum excutimus, et pertuſa membrana firma, quam pro altera mediaſtini plica habuimus, pulmo dexter ſanus ſatis et integer ſeſe prodidit; quique proculdubio utriuſque munere diu perfunctus eſt.

Paulo infra pulmonis marginem inferiorem, ſupra diaphragma, ſaccus erat quaſi ex membrana cellulari conflatus, qui, forfice apertus, binas circiter uncias liquoris flavo-viridantis, albuminis inſtar gelatinoſi, loculamentis membranaceis contenti, profudit. Num ex hoc fonte profluxerat iſta ſanies, quae indomabilem tuberculorum vim, faciem, collum, caeteraſque partes fedantem, enutriverat? Ita quidem veroſimile videtur; nam liquidi in utriſque color idem erat.

Pericardium proxime reſeratur, quod et ipſum liquore ſimili ſcatebat: effluxit quippe ex apertura ad duas fere uncias humor deſcripto, modo paullulum tenuior magiſque flaveſcens, ſimillimus.

Cor erat exiguum, tactui durum, et in bina aequalia quaſi loculamenta diſcretum: hic enim auricula dextra ſanguine diſtenta, vix cordi magnitudine cederet; ibi ventriculi cruore atro pauco craſſiſſimo farcti: inter utroſque vinculi partes agunt vaſa coronaria, cordis baſin arcte adſtringentia.

Ex

Ex ſecta auricula cruor aterrimus, ſpiſſus, corio tenaci apertus exprimitur; ipſius ſacci latera ex venulis varicoſis liveſcentibus tantum non conſtare videbantur.

Saepius inter ſecandum tam caſu, quam dedita opera, majores venas pertudimus at nunquam alias, tam parum ſanguinis effluxiſſe memini, iſque erat craſſus et niger, tanquam ſero omni et diluente lympha orbatus.

Luſtratis jam et ſua ſede viſceribus, ventriculum eximere partemque inteſtinorum libitum eſt, ut quantum ad formam ſitumque mutata eſſent, exploratum haberem: dum vero manus operae admoveo, leniterque ventriculi fundum prehendo, ecce omnino putris, et ne tactus quidem levis patiens, pars ima intra digitos collabaſcit.

Nulla aderant inflammationis gangraenoſae indicia: non rubor, non ſtriae, nulla ſtigmata liveſcentia: omnis albore pallet, et ſic tam nulla vi in tabem defluebat, ut potius acribus eroſam, vel humidis laxatam fuiſſe compagem, quam gangraena corruptam judicarem.

Nec

Nec intuenti ventriculi ſitum hoc abſonum videbitur. Heic enim ex imo viſceris hujus fundo, ad ſummum pylori jugum, aſcenſus omnino acclivis: in noſtra etiam ſublata erat vis ſepti renitens, cujus ope in altum attolli unice valuerant ventriculi contenta; plus itaque laboris muſculis ventris ſolis peragendum erat, quod quam in aliis peragitur, ſociato diaphragmatis nixu. Ingeſta proculdubio ſuam ſequi indolem, favente mora et quiete debuerant; quibus conditionibus ſi addamus perpetuum humoris gaſtrici ſtillicidium in unum quaſi ventriculi punctum, tam vomitus funeſti ortum, quam putredinis cauſam perſpectam habere poſſumus.

Hinc quoque manifeſtum erit, quare noctu quam interdiu procumbens quam erecta, laxe quam arcte veſtita, pejus ſe habuit: et quantas anxietates, aegritudines, et moleſtias, pati oportuit, quoties ſitus horizontalis, habituſque parum ſtrictus, aſcenſum facilem cibis in pectora praebuere? Cor ipſum mole praegravari neceſſe erat; luctam-

luctamque dubiam contra hoſtes irruentes ſolum ſuſtinere.

Tradita hucuſque rerum hiſtoria ſymptomatum explicationem promptam, ni fallor, reddidit, ideoque mihi ſupervacaneam: ſupereſt tantum modo, ut aliqua, quae in mentem mihi ſaepius morbum immedicabilem penſitanti venerunt, at pauciſſimis, referam.

1. Patet enim imprimis, animal poſſe vivere, vegere, laetari, et quodammodo valere, cui finditur vel diſrumpitur diaphragma.

2. Ideoque minus huic metuendum, in pectore pertundendo, quoties empyema aut hydrops remedium anceps experiri ſuadeant.

3. Ita affectum eſſe diaphragma, (1.) ſi ampla hianſque plaga fuerit, forte dignoſcendum, ex ipſa thoracis figura productiore, minus obliquo coſtarum ſitu, et laeſa ſimul reſpiratione.

4. In

4. In morbis infantum, quorum natura videatur reconditior, ex accurata partium externarum contemplatione, indagine, fortaſſis aliquid lucis elici queat: ideoque nequaquam praetermittendum.

5. Quotieſcunque tubercula, puſtulae exanthemata, ſingularem aliquam corporis regionem occupant, ibi ſubtus, in vicinia, malum fomitem latere ſuſpicandum.

Ita tandem caſum, nulla arte ſanabilem, et forte nimia diligentia expoſui; id vero aegre te laturum haud quidem exiſtimo: nollent enim neſcire cordatiores in arte viri, quibus ex cauſis praematura mors ſuperveniat, quotieſcunque cadavera luſtrandi copia conceditur: ipſos etenim medentes non ſolum rerum gnaros peritoſque reddit, verum etiam tam orbatis dolorem minuit, quam dedecus aufert arti, palam perſpectum habere, nullis remediis, nulla ope, ne quidem tua, ſupremam ſortem potuiſſe protrahi.

Vale, vir candide, diuque felix orbi interſis, bonarum artium patronus, medicaeque juventutis pater atque princeps.

VI. *An Account of ſome* Obſervations *and* Experiments *made in* Sibiria, *extracted from the Preface to the* Flora Sibirica, *ſive* Hiſtoria Plantarum Sibiriæ, cum tabulis æri inciſis. *Auct. D.* Gmelin. *Chem. & Hiſt. Nat. Prof.* Petropoli 1747. 4*to. Vol. I.**

BY direction of the late Empreſs of Ruſſia ſeveral Members of the Royal Academy of Sciences at Peterſburg undertook a journey into Sibiria, in order to enquire into the natural hiſtory of that country, and to make ſuch experiments and obſervations, as might tend to give a juſt idea of that almoſt unknown region, and to the improvement of phyſics in general.

Dr. John George Gmelin, Profeſſor of Chemiſtry and Natural Hiſtory at Peterſburg, was ſent at the head of this deputation, who, beſides ſeveral of his colleagues, and ſome ſtudents, had a painter or two, a miner, huntſman, and proper attendants in his retinue.

* From the Philoſophical Tranſactions, No. 486.

He

He ſet out upon this expedition in Auguſt 1733, and returned to Peterſburg in Feb. 1742, after having ſpent nine whole years in viſiting almoſt every part of Sibiria.

The fruits of this undertaking are deſigned to be communicated to the Public; and one volume of the Hiſtory of Plants has already appeared, under the title of *Flora Sibirica, ſive Hiſtoria Plantarum Sibiriæ, Tom. I. continens Tabulas Æri inciſas L. Auctore D.* Joh. Geo. Gmelin, *Chem. et Hiſt. Natur. Prof.* Petropoli *Typis Academiæ Regiæ Scientiarum* 1747. This is intended to be followed by ſeveral others, containing not only a deſcription of the plants, their *locus natalis*, &c. but their uſes among the inhabitants, ſo far as the Profeſſor could get information concerning them.

In a large Preface to this firſt volume, the ingenious and indefatigable Author has given us a conciſe account of Sibiria in general, its rivers, lakes, mountains, mines, the nature of the ſoil, fertility, &c. with ſeveral judicious experiments and remarks on the altitude of the earth

earth above the level of the ſea; but eſpecially on the qualities of the air in that climate; an abſtract whereof, at firſt drawn up for private entertainment, was thought not unworthy of more public notice, and is therefore addreſſed to the Royal Society.

The country, whoſe natural hiſtory Dr. Gmelin has collected, is of vaſt extent. It is bounded by a chain of mountains called the Werchoturian and Vralian on the weſt; by the ſea of Kamtſchatka on the eaſt; and comprehends all thoſe countries that lie betwixt the *Mare Glaciale*, and the borders of the Kalmucks and Mongales, to the very confines of China.

The rivers which water this tract are numerous; ſome of them large, and even receiving ſtreams in their courſe, which in other countries would be looked upon as capitals themſelves. The ſpace they meaſure is no leſs conſiderable. The Jaïk is the firſt river of note on the weſtern ſide. It riſes under the latitude of 54, of longitude 78, and runs into the Caſpian in 47 of latitude,

and

and 74 of longitude. The Irtiſch riſes in the country of the Kalmucks, latitude 46½, longitude 103; and empties itſelf into the Oby, lat. 61, long. 86. The Oby riſes under 52 lat. 103½ long. and loſes itſelf in the *Mare Glaciale*, lat. 67, long. 86, after running a courſe of near 800 leagues, and receiving a great number of rivers of conſiderable note. The Jeniſea is not much leſs than the Oby. The Selenga takes its riſe under lat. 48, long. 114, runs into the lake Baical, in 51° 20″ latitude, with many others equally conſiderable, which it would be tedious to mention.

The water of theſe rivers is for the moſt part freſh, clear, and ſalubrious. In ſome it is a little brackiſh, by the mixture of currents from ſalt lakes and ſprings, which abound in many places. They contain fiſh of various kinds in great plenty, and moſtly of an excellent flavour.

The lake Baical may deſerve ſome mention to be made of it, being one of the greateſt freſh-water lakes yet diſcovered. It ex-

tends, according to our author, from the one hundred and firſt degree of longitude, to the one hundred and twenty-ſeventh, being upwards of 500 leagues in length, and is from twenty-five to eighty leagues in breadth. It is every where deep and navigable; the water is extremely clear; it abounds with great plenty of fine fiſh. It receives a great number of rivers; but the Angara alone runs out of it: which joining the Tunguſca, loſes its name; as this likewiſe does, when it runs into the Jeniſea.

Salt lakes are common in many parts of Sibiria: ſome contain a pure white ſalt, well taſted, and fit for uſe; which, in ſummer, is cryſtalliſed by the heat of the ſun alone, and forms a cruſt on the top of the lake. In ſome this grows ſo heavy, as to break and fall to the bottom. Beſides this kind of pure common ſalt, which is fit for uſe, there is another ſort of a bitter taſte, much reſembling the *ſal mirabile*, found in ſeveral lakes in this country. Springs of ſalt water are ſometimes obſerved to riſe in the midſt of freſh water. Our author aſſures us, that

he has ſeen ſeveral ſuch; one eſpecially he obſerved riſing through a ſtone, in the bed of the river Angara.

Before we diſmiſs the ſalt lakes, we may juſt mention, that on the banks of the river Kaptendei, where it runs into the Wilvius, are a great number of ſalt ſprings, which afford excellent ſalt; and that, about thirty leagues above this place, along the ſame Kaptendei, on the right hand, is a hill about 30 fathom high, and 210 long, conſiſting entirely of *ſal gem.*

There are ſome lakes, which, our author informs us, in the memory of man, contained only freſh water, but now are very ſalt. One of this kind, about forty years ago, abounded with freſh-water fiſh, but is now become ſalt, ſmelling ſtrong of ſulphur, with a bitter taſte, and all the fiſh are killed.

The inhabitants aſſured our author, that ſome freſh-water lakes have been by degrees dried up, and that others have appeared where formerly it was dry ground; and that

even ſome of theſe new-formed lakes, which at firſt had no fiſh in them, are now very plentifully ſtocked. They have not recourſe to ſubterranean caverns or paſſages for a ſolution of this phænomenon; but aſſert, that ducks, ſea-mews, &c. that live upon fiſh, carry the eggs from one lake to another.

In the deſcription which our author gives us of the courſe of rivers, ſituation of lakes, &c. he takes notice of the ſoil, its barrenneſs, fertility, &c. Theſe are different, as it may be ſuppoſed, in the different parts of ſuch an extenſive climate under ſuch latitudes. About the lake Baical is the moſt fruitful tract, and thence is called the granary of that part of Sibiria. They grow ſome little corn about the latitude of 61. They have made of late trials ſtill further; but the ſucceſs was not known.

In his paſſage through Sibiria, he tells us, that he could ſcarce think himſelf in Aſia, till he got over the river Jeniſea; till then, he ſaw no animals, but ſuch as are common in Europe, at leaſt may be ſeen in the plains

waſhed by the lower part of the Volga. The plants and ſtones were of the ſame kind, and the face of the country in general, like other parts of Northern Europe. But from the Jeniſea, both to the eaſt, north, and weſt, the climate ſeemed to be wholly different, and as if enlivened with new vigour. It is mountainous; but theſe mountains are intermixed with rich delightful valleys and fruitful plains. The animal that affords the muſk, and the *muſimon* of the ancients, were now to be met with. Many of the moſt common European plants by degrees diſappeared, and others became frequent, which are ſtrangers in Europe. The purity, clearneſs, and ſalubrity of the waters, the exquiſite taſte of the fiſh and fowl, but more eſpecially the different genius and way of life of the inhabitants, plainly proved they were got into another climate. This remark our author ſubmits to the conſideration of Geographers.

Amongſt the curioſities of Sibiria the Profeſſor mentions a place remarkable for its exceſſive coldneſs in the midſt of ſummer. It

It is in the province of Jacutſki, about the middle way to Ochotz along the river Jucanan; it is called by the Ruſſians Springing Ice, by the natives the Icy Lake. Three other ſuch places occur within the circuit of eighty leagues.

The provinces beyond the lake Baical are mountainous, with high and wide-extended plains lying betwixt them, which in many places are only covered with barren ſand; ſo that in ſome places one may travel thro' ſuch deſerts one, two, or three days together, without finding wood enough to make a fire, or any other water than that of ſalt ſprings, which are very frequent; and being dried up by the ſummer heats leave a ſaline cruſt, very much reſembling *Natron*, being of an alcaline nature, with a ſulphureous ſmell.

The country that borders on the rivers Uruncan and Gaſimur is extremely rich and fruitful. The face of the country is delightful, and its produce to the huſbandman almoſt exceeding his hopes: but what renders

it ſtill more ſurpriſing is, that a country, whoſe ſoil yields to few in fertility, and the beauty of its bloom, ſhould yet cover immenſe riches in its boſom. Here are mines of gold and ſilver, which have long been worked to advantage: the veins are rich, and lie ſhallow; yet communicate no poiſonous effluvia to the vegetables that cover them: nor do thoſe diſtinguiſhing marks of ſterility appear here, which in moſt other mining countries are ſo obſervable.

The higheſt part of Sibiria is towards the ſprings of the rivers Argun, Schilca, &c. about the 49th deg. of lat. 130th longit. This part is deſtitute of marble and limeſtone, which are almoſt every where to be met with in the lower tracts both of Sibiria and Ruſſia: no petrifications are to be found here, either of the teſtaceous or cruſtaceous animals: and the veins of ore are always found near the ſurface, never entering deep into the earth. Beſides the mines of gold and ſilver above-mentioned, copper and iron are found in ſeveral places; likewiſe the *Glacies Mariæ* or Muſcovy Glaſs is dug near

near the river Mama. Loadſtones are alſo got in Sibiria; and in ſeveral of the rivers beautiful tranſparent pebbles and cryſtals occur.

I ſhall only add, that there are ſome natural warm baths in ſeveral parts of Sibiria, and ſome of them of a moſt agreeable temperature; and proceed to the account of our Author's obſervations and experiments on the height of the earth, &c.

Pauda is allowed to be the higheſt of all that ridge of mountains called Werkoturian. Our Author endeavoured to take the height of it by means of the barometer.

On the 11th of December 1742, at our Author's lodgings at the foot of Pauda, the mercury in the barometer, in a cold place, but within doors, ſtood at $26\frac{83}{100}$ Paris meaſure. He then carried it up the mountain as high as he could go, which was about one-third of the whole height, where he hung up the barometer on a tree, from 9 to 11 in the forenoon, making a good

fire pretty near it, leſt the intenſe cold, which ſunk the quickſilver in De Liſle's thermometer to 201, ſhould affect the barometer, and lead him to aſcribe that to gravity, which was only owing to the contraction of cold.

Under theſe circumſtances the quickſilver ſunk to $25\frac{32}{100}$.

Hence, according to M. Caſſini's calculation, our Author's firſt ſtation will be 941 feet higher than the level of the ſea: the ſecond on Pauda 1505 f. and the whole height of this mountain 4515, or 752 Paris toiſes; which added to 941 feet, the height of his lodgings at the foot of Pauda, makes 5456 feet, or 909 toiſes, the height of Pauda's top above the ſea; ſuppoſing the level of the ſea to be 28 inches, as the Paris Academicians have fixed it: tho' this differs from obſervations made on the barometer at the ſea-coaſt of Kamtſchatka at Bolcheretz; where, from experiments made above two years, the mean height of the mercury was 27 inches, $6\frac{1}{2}$ lines. And at Ochotz,

during

during a year's obſervations, the mean height was found to be 27 inches and about $8\frac{1}{2}$ lines.

Hence it would appear, that the ſea of Kamtſchatka is higher, with reſpect to the earth's center, than the ocean and Mediterranean; and at Bolcheretz higher than at Ochotſki.

The following liſt of barometrical obſervations, made in various parts of Sibiria, will ſhew the different heights of the different tracts in it.

	Feet	Toiſes	Inches
The mean height of the barometer, from a year and 10 months obſervations at Ircuts, was	——	——	26 $\frac{38}{100}$
Its height above the ſea will then be	1355	or 226	——
At Selengia, 1 month's obſervations	——	——	25 $\frac{95}{100}$
Its height above the ſea	1779	or 296	——
At Kiachta, a town on the confines of China 12 days obſervations in April and May, mean height	——	——	25 $\frac{75}{100}$
Its height	2400	or 400 *	
At Nertſchia, from 20 days obſervations in June	——	——	25 $\frac{99}{100}$
The height above the ſea	1738	or 298	——
At the ſilver mines at Argun 9 days in July	——	——	25 $\frac{63}{100}$
The height above the ſea	2121	or 353$\frac{1}{2}$	——

* In the copy before me appears to be a great miſtake, either of the printer, or in the manuſcript; it being put down in words at length, *bis mille quadringentarum Orgyarum cum dimidia*; which is impoſſible; and the number of feet is not exact, according to other calculations.

Our

Our author adds ſeveral judicious reflections upon the time and manner of making theſe obſervations, in order to determine any thing with certainty, which he has endeavoured to keep ſtrictly to in theſe experiments; and concludes, that the plains in ſome parts beyond the lake Baical, are almoſt as high as the tops of high mountains in ſome other countries; Mount Maſſane, according to the French Geometricians, being but about 408 toiſes high, which differs but little from the plain country at Kiachta; which yet has conſiderable mountains riſing in its neighbourhood.

From whence our author concludes, that the elevation of the earth, in this tract, above the level of the ſea, is very great, compared with the weſt part of Sibiria and Europe *.

* M. De la Condamine, in his voyage through the inland part of South America, makes Quito to be between 14 and 1500 toiſes above the level of the ſea. Suppoſe — 1450
He tells us, that Pichincha is 750 higher 750

This makes in the whole — — — 2200 toiſ. above the level of the ſea.

P. Martel, engineer, in his account of the Glacieres in Savoy, printed at London 1742, tells us, that the barometer at Geneva, by the ſide of the Rhone, ſtood at 27 $\frac{5}{12}$ I. which is 656

The air of Sibiria, with reſpect to its gravity, is, as in other countries, the nearer the ſea the heavier; and the more remote, the lighter: ſo that at Kiachta, ſcarce one perſon in our author's retinue eſcaped without ſome indiſpoſition. They were ſeized after their arrival, ſome with acute fevers, others complained of extreme laſſitude and dejection. It was in the ſpring ſeaſon, the weather moderate, their manner of living regular, nor had they been much fatigued with their journey; in ſhort, they could attribute it to no other cauſe than the lightneſs of the air.

In theſe provinces, viz. beyond the lake Baical, our author tells us, that intermittents are ſeldom heard of, and ophthalmies are endemic; but that, in the fenny tracts which lie near the Oby and Janiſea, intermitting fevers are very frequent.

656 feet above the level of the ſea, according to Scheuchzer; and that the higheſt point of Mont Blanc, meaſured partly by the barometer, and where inacceſſible from the ſnow that covers it, by trigonometrical operations, is 12459 feet, or ſomewhat more than 2076 toiſes above the level of the Rhone; which, added to the height of this above the ſea, makes 13115 French feet, or about two Engliſh miles and two-thirds.

The

The coldneſs of the air of Sibiria is of all others the moſt remarkable quality. In ſome places it ſnows frequently in September, and not ſeldom in May. In Jacutſk, if the corn is not ready to cut in Auguſt, which often is the caſe, the ſnow ſometimes prevents it, and buries the harveſt all together. At Jacutſk, the Profeſſor ordered a hole to be dug in the earth, in a high open place, on the 18th of June; the mold was 11 inches deep; below that was ſand about 2½ feet; it then began to feel hard, and in half a foot more it was froze as hard as poſſible. In a lower place, at no great diſtance from this, he ordered another hole to be dug: the ſoil was 10 inches; ſoft ſand 2 feet 4 inches; below this, all was congealed; ſo that the earth is ſcarcely thawed even in ſummer above four feet deep.

Our author inclines to the received opinion, that the eaſtern climates under the ſame latitude are colder than the weſtern; and thinks this is confirmed by experiments made in different parts of Sibiria.

The

The mercury in De Liſle's thermometer often ſunk in winter in very ſouthern parts of this country, as near Selinga, to near 226, which is equal to 55½ below 0 in Fahrenheit's thermometer. But the cold is often much more intenſe than this, as appears by the following experiments, made at Kirenginski.

Feb. 10. 1738. at 8 in the morning the Mercury ſtood at 240 degrees in De Liſle; which is 72 below 0. in Fahrenheit's. On the 20th, it ſunk one degree.
At the ſame place in 1736.
Dec. 11. at 3 in the afternoon 254 in Deliſle.
Almoſt 90 below 0. in Fahrenheit.
Dec. 20. 4 o'clock p. m. 263 in Deliſle.
99 44/100 below 0. in Fahrenheit.

		D.	F.
Nov. 27.	12 at noon	270 =	107 71/100 below 0.
Jan. 9.		275 =	113 05/100
1735. Jan. 5.	5 in the morn.	260	
	6 ——	280 =	120
	8 ——	250 and roſe by degrees till 11 at night, when it ſtood at 252.	

Such an exceſs of cold could ſcarcely have been ſuppoſed to exiſt, had not experiments, made with the greateſt exactneſs, demonſtrated the reality of it.

During this extreme froſt at Jeniſea, the magpies and ſparrows dropped down as they flew, and to all appearance dead; though they

they moſt recovered when brought into a warm room. This was quite new to the inhabitants of that country; though it frequently happens in Germany in much leſs intenſe cold, when the weather ſets in at once very ſevere.

The air, ſays our author, was at that time extremely unpleaſant; it ſeemed as if itſelf was froze, being dark and hazy; and it was ſcarce poſſible even to bear the cold in the door-way for three or four minutes.

Theſe experiments, our author aſſures us, were made with all poſſible exactneſs, and agree with many others, made in different parts of Sibiria by his direction; and from theſe we may conclude, that the cold in Sibiria is more intenſe than it has yet been found to be in any other part of the world.

It was not apprehended that a greater degree of cold exiſted any where, than that artificial one produced by Boerhaave, by means of concentrated ſpirit of nitre, which ſunk the Mercury 40 degrees below 0. in Fahrenheit's;

heit's; which was ſuppoſed to be the point beyond which no animal could bear it.

But the utmoſt limits of cold are yet unknown; or to what degree an animal can ſubſiſt in it, when inured to it by little and little. The hiſtory of heat is alike imperfect. The celebrated Profeſſor above-mentioned was induced to think, that a man could not bear, without the utmoſt danger, a greater heat than that which would raiſe the Mercury to 90 in Fahrenheit's; but an ingenious and accurate correſpondent of our author's at Aſtrachan informs him, that it not only riſes there to this degree frequently, but even to 100, and he has ſeen it 103½. Even in the bagnios in Ruſſia, the heat is often equal to 100: it ſometimes makes the quickſilver aſcend to 108, 10, and to 116, as may be tried every day; and yet people not only bear them with impunity a few minutes, but often ſtay half an hour or an hour.

One neceſſary obſervation our author makes, which is, that the ball or tube containing the mercury ought to be as dry as poſſible on the outſide, during theſe or any other

other trials with the thermometer: for the adhering moiſture, by forming a cooler atmoſphere round it, has ſometimes occaſioned a difference of ten degrees.

Theſe are ſome principal facts given us by our author in his preface, relative to the natural hiſtory of Sibiria in general: what follows chiefly regards the work it is prefixed to.

As a juſt idea of this part cannot be exhibited in a narrow compaſs, the curious in this branch of ſcience muſt be referred to the book itſelf.

I have only to acknowledge with gratitude the inſtruction and entertainment I have received from this elaborate work: it is a tribute juſtly due to the learned and ingenious author, in return for the pains he has taken, and the fatigue he has endured in this inhoſpitable region; and to entreat your indulgence, if I have flattered myſelf too much, in apprehending this excerpt might afford you ſome amuſement.

VII. *An*

VII.

AN

ACCOUNT

OF THE

PUTRID SORE THROAT.

PREFACE*.

WHEN the following Treatiſe was firſt publiſhed in the year 1748, the diſeaſe which is the ſubject of it was not generally known in England, though it had ſpread like a plague through many of the ſouthern parts of Europe about a century before, and had carried off great numbers of people, of children eſpecially.

From the time of its firſt appearing in this Nation, it has viſited many parts of the Kingdom, with different degrees of violence, as different cauſes contributed to render it more or leſs malignant.

It is probable that this kind of Sore Throat may continue amongſt us for the future, breaking out with more or leſs ſeverity, as ſeaſons, ſituations, and other circumſtances, may concur. And,

Though its aſpect has ſometimes varied, according to the epidemic conſtitution, yet upon the whole it has ſeldom, in any place that I have heard of, deviated ſo far from the following deſcription, as to leave it doubtful under what ſpecies of diſeaſe it ought to be ranked.

* This Preface was prefixed only to the fifth and ſixth editions of the work, the preceding editions having been publiſhed without any. E.

PREFACE.

Warranted by the authority of thoſe Phyſicians who had early and extenſive opportunities of obſerving this diſtemper in Italy, Spain, and other Countries, at its firſt breaking out in Europe, as well as by the experience of ſome Phyſicians at home, the late very eminent and learned Dr. Letherland particularly, inſtead of treating it as an inflammatory diſeaſe, which a Sore Throat was generally deemed to be in this country, a warmer regimen was propoſed, and ſuch as is moſt commonly purſued in putrid fevers, and diſorders allied to them.

This method has for the moſt part ſucceeded very happily; and it now ſeems to be the concurrent opinion of the moſt experienced in the faculty, that a generous and cordial regimen is in this ſpecies of Sore Throat the moſt ſalutary.

Amongſt all the ſymptoms which attend this diſeaſe, there is none more formidable than perpetual watchfulneſs, with a delirium. Theſe ſymptoms moſt commonly affect the adults, and eſpecially the ſanguine and plethoric.

The throat, in theſe circumſtances, is ſeldom much ulcerated; this part is the leaſt of their complaints: the patients are hot, reſtleſs, and, though delirious, are ſenſible for a moment, and anſwer queſtions put to them, not improperly. The ſkin is covered with a deep eryſipelatous redneſs, and always dry, as they are continually moving about. The pulſe is quick, ſmall, and hard; the urine various, often turbid, yet ſometimes clear and flame-coloured.

In

In ſuch caſes bleeding ſeems not only allowable, but neceſſary, eſpecially by cupping from the back of the head, or by leeches from the temples; from the arm perhaps it might occaſion too great faintneſs; and a retreat of that eruption, which though no critical diſcharge, but rather a ſymptom of malignity, ought not to be repreſſed.

After bleeding, the Bark, conjoined with Alexipharmacs, as the ſimple or compound powder of *Contrayerva*, *Confectio Cardiaca*, or the like, may be exhibited, in quantity and frequency proportioned to the age and ſymptoms.

The uſe of the Bark in the cure of this diſeaſe was unknown to the early practitioners. It is but of late that this celebrated medicine has been uſed with freedom in this as well as in other putrid diſeaſes, and with great advantage.

The difficulty of prevailing upon children afflicted with this diſtemper to take any kind of medicine, put me early on trying the Bark in clyſters, and ſometimes when there ſeemed very little chance of relieving them by any means. To very young children, two or three drachms of the Bark, in fine powder, have been given every ſix hours, in three or four ounces of broth, as a clyſter, adding a ſmall quantity of the *Elect. è Scordio* to the ſecond or third, if the firſt was diſcharged too ſpeedily; and this has ſaved many, when not a drop of any medicine, and ſcarcely any kind of nouriſhment, could be ſwallowed.

Adults may take half a drachm of the powder in an ounce and a half of the decoction, warmed with any grateful com-

pound water, every two or three hours; taking particular care to prevent any conſiderable tendency to a diarrahea, from the uſe of the medicine.

Free, but not cold air, plenty of liquid nutriment and generous, with conſtant attention to keep the patients clean, their mouths and throats often waſhed, and their linen changed, contribute greatly to the cure of this diſeaſe. While their ſkin is covered with that deep efflorescence, if they are at all ſenſible, they often complain of the leaſt admiſſion of cold air, and very frequently of much ſickneſs and oppreſſion, if this efflorescence ſpeedily diſappears.

To favour this eruption, it will always be proper to put thoſe who are ſeized with this diſtemper to bed as early after ſeizure as poſſible, and to give the mild and cordial diaphoretics. And as a preſervative, I have often recommended the Bark to be given both in decoction and ſubſtance, with the addition of ſuch a quantity of the volatile tincture of *Guaiacum*, as may render it gently purgative.

Though the Faculty and the Public are now ſufficiently convinced of the exiſtence of this diſtemper, and it may ſeem therefore needleſs to continue ſo many teſtimonies of it; yet as this recapitulation may ſerve as an index to ſome of the moſt approved Authors on the ſubject, it may not be without its uſe to inquiſitive practitioners; and others may eaſily paſs it over to a part in which they are more immediately intereſted, viz. the knowledge and cure of this diſeaſe, as it has appeared, and ſtill continues to appear, in many parts of this Nation.

J. F.

Nov. 25, 1759.

PART I.

Of the SORE THROAT *attended with* ULCERS;

As it appeared in SPAIN, ITALY, SICILY, &c.

THE diſeaſe which is called by the Spaniards *Garrotillo** ; by the Italians, and other nations, *Morbus ſtrangulatorius, Peſtilens Faucium Affectus, Epidemica Gutturis Lues*, and by divers other appellations †; is ſaid to have appeared firſt in Spain about the

* Ab Hiſpanis Garrotillo appellatur, ut eadem patiantur Angina laborantes, quae facinoroſi homines, cum injecto circa collum fune ſtrangulantur. Epiſt. R. Moreau ad Th. Barth. Epiſt. Med. Cent. i. p. 336.

† Affectus ſuffocatorius, Carbunculus anginoſus, Phlegmone anginoſa, Angina peſtilentialis, Morbus Gulae, Morbus Puerorum, Peſtilens ac praefocans pueros abſceſſus, Tonſillae peſtilentes, Ἀσχόη λοιμώδης, Apthae malignae, Paſſio anginoſa, Laqueus gutturis, &c. Vide Corteſ. Miſcel. Med. p. 666. Severin. & Epiſt. Ren. Moreau ad Th. Barthol. de Laryngotomia.

year 1610; to have ſpread from thence to Malta, Sicily, Otranto, Apulia, Calabria, and the Campagnia, in the ſpace of a few years; and to have broke out at Naples in 1618, where it continued upwards of 20 years ravaging the different parts of that kingdom *.

It is not certainly known how much longer it remained in theſe countries, or to what others it was communicated at that time, its declenſion being as obſcure as the cauſes it ſprung from. That it wholly diſappeared in theſe parts, ſoon after the time abovementioned, ſeems probable, from the ſilence of thoſe phyſicians, who have publiſhed their obſervations made in the places, which had ſo ſeverely felt the effects of this diſtemper.

Several writers, as Wierus †, Forreſtus ‡, Ramazzini §, and others, take notice of epi-

* Severin. de recondita abſceſſium natur. p. 446.

† Joh. Wieri Obſervat. lib. vi. de Angina peſtilenti epidemica, Oper. p. 910.

‡ Pet. Forreſt. Obſervat. lib. vi. de Febribus publice graſſantibus, p. m. 150.

§ Bern. Ramazzini Conſtitutiones Epidem. Oper. p. 195, & ſeq.

demic

demic affections of the throat, in ſome reſpects reſembling the diſeaſe here deſcribed; but a little attention to the ſymptoms of each will, I think, diſcover an eſſential difference between them. The ſame, I think, may be ſaid of the ſore throat and the ſcarlet fever, which ſhewed itſelf at Edinburgh in 1733 *.

Tournefort, in his voyage to the Levant †, ſeems to have met with this diſeaſe in the iſlands of the Archipelago; at leaſt ſo far as one can judge from the imperfect deſcription we have of it. His account is as follows:

"When we were in this iſland (Milo) "there raged a terrible diſtemper, not un- "common in the Levant: it carries off "children in twice 24 hours: it is a car- "buncle or plague-ſore in the bottom of the "throat, attended with a violent fever. "This malady, which may be called the "child's plague, is epidemical, tho' it ſpares "adult people. The beſt way to check the

* Medical Eſſays, vol. 3. p. 26.
† Tournefort's Voyage to the Levant, vol. 1. p. 133.

"pro-

" progreſs of it, is to vomit the child the " moment he is perceived to grow heavy- " headed. This remedy muſt be repeated, " according as there is occaſion, in order to " evacuate a ſort of *aqua fortis* that diſ- " charges itſelf on the throat. It is neceſ- " ſary to ſupport the circulation of the " juices, and the ſtrength of the patient, " with ſpirituous things; ſuch as the *The-* " *riaca, Spir. vol. oleoſ. aromat.* and the like. " The ſolution of liquid ſtyrax in brandy is " an excellent gargariſm upon this occaſion. " Tho' it is a caſe that requires the greateſt " diſpatch, the Levantines are ſeldom much " in haſte in the cure of any diſeaſe."

This account does not diſagree in general with that which has been left us of the *morbus ſtrangulatorius*; only he is ſingular in aſſerting it to ariſe from a kind of *aqua fortis* diſcharged upon the parts; but his favourite ſtudy had engroſſed his attention, and to this we muſt impute both the preſent miſtake, and his want of accuracy and preciſion too frequently, when he treats upon medical ſubjects.

When

When it firſt broke out in the countries above-mentioned, it ſoon engaged the phyſicians of thoſe times, as well to obſerve its nature, effects, and whatever might contribute to its cure, as to vindicate their reſpective ſyſtems and opinions; and out of ſuch of the tracts then publiſhed as I have had an opportunity of peruſing, the following account of it, as it appeared at that time, has been collected.

Ludovicus Mercatus, phyſician to Philip II. and III. Kings of Spain, among his Conſultations, publiſhed in tome V. of his works *, has one upon this diſeaſe †. He mentions it as a calamity which had but newly appeared, and at that time affected ſeveral provinces and cities of that kingdom. He has related only one caſe; but in commenting upon it, according to the method of writing on diſeaſes then in uſe, he takes notice of ſeveral circumſtances relative to it, and makes

* D. Ludovici Mercati, medici a cubiculo Philippi III. Hiſpaniarum—Regis, &c. Oper. Tom. 5. Francof. 1614.

† De Faucium et Gutturis anginoſis et lethalibus Ulceribus. Conſultatio xxiv. p. 137.

ſome

ſome obſervations reſpecting the cure, which, tho' they ſeem to have been neglected, by many who ſucceeded him, experience hath ſince ſhewn to be juſt; ſome of theſe will be pointed out in their proper places: and, conſidering that he wrote very ſoon after the diſtemper broke out, the approbation prefixed to this part of his work being dated in 1612, they are a proof of his attention and ſagacity.

Johannes Andreas Sgambatus, a phyſician of Naples, publiſhed a treatiſe upon this ſubject in 1620 *. He gives us a methodical and pretty exact hiſtory of the ſymptoms, and method of cure both general and topical, together with a ſummary view of the diſputes, which were at that time managed with ſufficient heat and acrimony, in relation to its name, cauſe, and nature; about which they were as much divided as they were about the method of cure; each party

* De peſtilente faucium affectu Neapoli ſaeviente, opuſculum, auctore Jo. Andrea Sgambato, philoſopho ac medico Neapolitano, et academico otioſo. Neapoli excudebat Tarquinius Longus, 1620, in 4to.

appealing to Hippocrates, Galen, Avicenna, &c. for the ſupport of their opinions concerning a diſeaſe, which it is not certain that thoſe whom they appeal to ever ſaw.

Johannes Baptiſta Corteſius, in his *Miſcellanea Medica* *, takes notice of this diſeaſe, and deſcribes its principal ſymptoms, in a letter to Jo. Anton. Anguilloni, phyſician in chief to the Malteſe gallies. He conſiders it indeed as a different diſtemper from that which infeſted Naples, and other parts of Italy; tho', from his own account of it, there appears little reaſon to queſtion its being the ſame. He ſeems to have been led into this miſtake, by conſidering the diſeaſe he treats of, as contagious only in a certain limited ſenſe, whilſt the Italians, as ſome of the Spaniards had alſo done, declared theirs to be peſtilential and contagious without reſtriction. He allows, that the breath of a perſon affected might convey the contagious effluvia to another near at hand; and gives

* Joannis Baptiſtae Corteſii, medici ac philoſophi, in Meſſanenſi academia praxim ordinariam e prima ſede interpretantis, Miſcellaneorum Medicinalium Decades Denae. Meſſanae 1625, in fol.

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an inſtance of one who got the diſeaſe, and died of it, by trying, at his friend's requeſt, who then laboured under this diſeaſe, if his breath was affected * ; for from this circumſtance they gueſſed at the degree of danger attending the ſick.

In 1636, Ætius Cletus, of Signia in Italy, publiſhed his treatiſe *De Morbo ſtrangulatorio* †. He mentions ſome facts relating to it, that had eſcaped Sgambatus and Corteſius, which will be taken notice of hereafter.

* Divi Franciſci Cuſtos, vir doctrina et moribus inſignis, hac lue obſeſſus, tonſillas ſolummodo et gargareonem inflammatione laeſa habebat, et continuo querebatur ſe percipere in ore foetorem quendam ; et ut hac de re certior redderetur, ad ſe vocavit baccalaureum quendam ſibi amiciſſimum, qui maximo affectu aſſiſtebat, rogavitque ut vellet olfacere, percipereque naribus, an verum eſſet talem foetorem emittere, an ab ejus imaginatione prodiret : olfecit baccalaureus, me (ſcil. Corteſio) praeſente, et multis aliis : at ſtatim non multis elapſis horis decubuit ſola faucium et glandularum inflammatione vexatus, abſque aliqua manifeſta corruptione partium, omnibuſque praeſidiis ex arte factis, quarto die ſuffocatus periit ; et tamen Cuſtodem non tetigerat, ſed ſolo olfactu aerem ab ore prodeuntem naribus traxerat : quare ab hujuſmodi exemplo veni in ſententiam hunc morbum non eſſe abſque aliqua contagione. Cort. Miſcel. p. 698.

† De morbo ſtrangulatorio, opus Ætii Cleti Signini, doctoris medici et philoſophi. Romae 1636, 8vo.

Marcus

Marcus Aurelius Severinus, Profeſſor of Anatomy and Surgery, and phyſician to the Hoſpital of Incurables at Naples, wrote a diſſertation upon this diſeaſe, under the title of *Paedanchone Loimodes, ſeu de peſtilente ac præfocante Pueros Abſceſſu*; and annexed it to the ſecond edition of his book *De recondita Abſceſſuum Natura*, which was printed in 1643 *. From a perſon of his capacity, and furniſhed with the beſt opportunities of ſeeing the diſeaſe in every ſtage and condition, we might reaſonably have expected ſuch obſervations as would enable one to form a juſt idea of this diſtemper; but we meet with little of this kind in his performance. He has indeed mentioned ſome circumſtances relating to its hiſtory, not taken notice of by the other writers I have ſeen, and his method of cure is different from the reſt; but he refers us to others for an account of the ſymptoms, and contents himſelf with reciting and

† De recondita abſceſſuum natura, libri 8. Marci Aurelij Severini Tharſienſis, philoſophi et medici, regio in gymnaſio Neapolitano anatomes et chirurgiae profeſſoris. Editio ſecunda, Francofurti ad Maenam 1643. And again printed with Bartholine's Exercitationes, as a commentary upon it, and Villani's Therapeuta Neapolitanus, ſeu Veni mecum Conſultor. Neapoli. 1653.

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commenting upon Aretaeus's deſcription of the *Ulcera Syriaca*, which he takes for granted to have been the ſame with the diſeaſe at that time infeſting Naples; tho' very probably without ſufficient reaſon.

Petrus Michael de Heredia, phyſician to Philip IV. King of Spain, in his *Diſputationes de Morbis acutis*, treats of this diſeaſe expreſsly in ſeveral chapters under the title of *Angina Maligna*. His hiſtory of the ſymptoms contains ſeveral circumſtances which were not taken notice of by any other writer I have ſeen; ſo that though he was probably among the laſt of the Spaniſh phyſicians who wrote upon this ſubject, yet the diligence of his predeceſſors had not wholly exhauſted it. In the ſecond edition of Heredia's works, which was that I made uſe of *, nothing appears whereby to aſcertain the time exactly when he wrote his account; but as he mentions the *Polyanthea* of De la Parra, which, according to Ren. Moreau in

* Petri Michaelis de Heredia Complutenſis---Philippi IV. Hiſpaniarum regis archiatri---Opera medicinalia—Lugduni 1673. fol.

Bartho-

Bartholine's Epiſtles, was printed at Madrid in 1625, it is plain that he muſt have written after this time.

One might juſtly expect ſome curious obſervations upon this diſeaſe, from a perſon ſo well qualified for it as Thomas Bartholine: he was in Italy whilſt it raged there, and, it might be ſuppoſed, would be attentive to the minuteſt circumſtance relating to it, and be inquiſitive enough to know what men of character had ſaid upon it. But the Treatiſe which he wrote upon this diſeaſe, and publiſhed in 1646‡, contains ſo little to the purpoſe, that it is difficult to conceive for what end it was written, unleſs to compliment his maſter Severinus, which he does very liberally‖.

‡ Thomæ Bartholini de Angina Puerorum Campaniæ Siciliaeque epidemica exercitationes, Lut. Pariſior. 1646.

‖ Zacutus Luſitanus alſo mentions this diſeaſe, and relates an unhappy inſtance of its effects in the following terms:

In his partibus (ſcil. faucibus) ex humoris virulenti affluxu gignuntur carbunculoſae inflammationes, quae peſtis dirae, aut veneni promptiſſimi inſtar, contagio quodam, pueros et adultos corripiunt; et ſaevis maleficentiſſimiſque ſtipatae ſymptomatis citiſſimam necem inferre ſolent. Malum in Hiſpania non multis abhinc annis frequens, vulgus medicorum Hiſpano ſermone *Garrotillo* nuncupat; de cujus eſſentia, periculo, brevitate, et complicatione uſtivi et ulce-

According to the accounts which have been left by theſe Authors, it appears, that the diſeaſe which they deſcribe was extremely malignant, and moſt particularly fatal to children, tho' adults, if they were much converſant about the ſick, were very often ſeized with it; yet more of theſe recovered in proportion than of children; and it was obſerved, that more boys got well thro' the diſeaſe than girls: Some thought, that ſuch of this ſex as had black eyes ſuffered more from it than others.

As it was ſometimes obſerved to carry off whole families together, and to ſpread to thoſe places firſt, between which and the countries affected by it the communication was moſt frequent; and alſo that children,

roſi tumoris, ac deleteria corruptione, laconice dicam. Hoc fuit preſſus biennis infans, ſanguineus et obeſus. Primo die ex catarrhoſa defluxione in ſuffocationem pene incurrit, difficulter reſpirabat, et lac deglutiebat, et febri acuta affectus, nec plorare poterat. In parte gutturis dextra externa glandulofus apparuit tumor cum dolore multo. Secunda die intra fauces ulcus viſum eſt ad nigrum vergens, quod putrilago et mollities multa comitabantur; et ab ore foetor horribilis prodibat, magnum certe corruptionis completae indicium. Tertio die nullis adjutus auxiliis ſtrangulatus eſt extinctus. De Praxi Medic. Admiranda, lib. 1. obſerv. 20.

ſent away from the towns where it raged, in order to avoid it, eſcaped whilſt they were kept at a diſtance, but had it on their return, if the diſeaſe was not extinguiſhed; it was almoſt univerſally allowed to be contagious †.

Thoſe who were ſeized with it, firſt complained of a pain or ſoreneſs in the throat, with a ſtiffneſs of the neck, an uneaſineſs on moving it, as if a cord was twiſted about it, a difficulty in ſwallowing, and frequently in breathing alſo, with a diſagreeable fetid ſmell and taſte. On inſpection, the *Uvula*, the *Tonſils*, *Pharynx*, and the whole *Fauces*, appeared of a remarkably florid red colour, like that attending an *Eryſipelas:* This colour was not uniformly intenſe, but ſome parts ſeemed to be of a deeper dye than others. The parts above-mentioned were ſwelled more or leſs, tho' not always ſo much as to affect reſpiration, as in a common *Angina*.

† Quod ad contagium attinet, hoc communi omnium conſenſu atque experimento evincitur. Severin. p. 442.

If the attack was violent, they had an extreme difficulty in breathing, and alſo in ſwallowing, with a kind of compreſſive pain and ſtraitneſs of the breaſt and back, a redneſs of the whole face and neck, great heat of all the parts affected, the voice much injured, an unquenchable thirſt, and the patient ſeemingly in danger of being choaked *. In ſome, the ſwelling and ulcers of the *fauces* were apparent upon looking into the mouth; in others, nothing could be ſeen, but a moſt offenſive putrid ſmell was perceivable. A fever came on with the other ſymptoms, and was frequently accompanied with ſmall pimples and eruptions like flea-bites. In very bad caſes, this fever, which Mercatus calls a moſt malignant one ‡, did not always diſcover its violence

* —— difficultas reſpirandi, et non raro deglutiendi, cum pectoris et dorſi dolore ac veluti compreſſione ſuffocante, ſimul cum peſtilente odore, et vehementi harum omnium partium ardore, et rubore totius oris et colli, cum vocis et loquelae vitio, ac linguae extractione, et ſiti incompeſcibili. Mercat. Conſult. p. 136.

‡ Maxime ob maligniſſimam febrem, quam plerumque ſibi adjunctam habet, &c. Conſult. p. 136.

or

or malignity at firſt; but it was not the leſs formidable on this account *.

On the ſame day, or the day following, ſuch parts of the *fauces* as at firſt ſeemed to be of a deeper colour than the reſt, turned white, aſh-coloured, or black: this was not occaſioned by any cruſt or matter ſuperinduced upon the parts, but proceeded from a gangrenous colliquation of them, the ſubſtance itſelf being mortified.

The voice was hoarſe and obſcure, not as in a common cold, but as it is in thoſe people who have venereal ulcers in the throat: ſo that, from this affection of the voice alone, ſome were able to gueſs at the diſeaſe †.

The neck and throat ſoon after began to ſwell externally; the tumour was of a ſoft oedematous kind, and encreaſed in magnitude

* —nec multum fidere oportet, ſi febris mox non apparuit aut ſuccreſcat, nam ſaepe citius ſuffocat affectio, quam cauſa ſuccendatur; ac non raro malignitas humoris corrumpit ſpiritus et mortem accelerat, ſine eo quod febris ſuccendatur. Mercat. Conſult. p. 137.

† Severin. p. 442.

as the diſeaſe advanced. All the ſymptoms were aggravated during the night. If the patients had any interval of quiet, it was commonly in the day-time *. About the fourth day this tumour was generally grown very large, and the white places in the *fauces* began to turn black; a putrid corroſive ſanies was diſcharged by the mouth and noſtrils †; the breath grew extremely offenſive; reſpiration, if hitherto not much affected, now became difficult, and the patient expired in a very ſhort time.

Tho' this was the common progreſs of the diſeaſe, where it terminated unhappily, yet it often varied from this type, and was attended with very different ſymptoms. Some had an extreme difficulty of breathing almoſt from the firſt; ſome had a violent cough;

* Sgambat.

† Quibus etiam accedit ſublimis reſpiratio et alta ac ſpirituum revulſio, cum maxima pinnarum naſi diſtenſione.—ſaniei per os et nares excretio, variis ulcerum coloribus et intenſiſſimo foetore nauſeam plerumque movente cum ſordida excretione. In aliquibus vero extra, prope cervicem, et infra mentum glandulae apparent, peſtiferi morbi naturam redolentes, et univerſa cervix, et collum intumeſcunt, et fauces cum robore ſaturato, inſtar laqueo ſuffocatorum. Merc. Conſult. p. 136.

ſome

ſome were comatous; others had a delirium; ſome died in a lethargic ſtupor; others bled to death at the noſe; whilſt others again had none of theſe ſymptoms, but were carried off ſuddenly by an inſtantaneous ſuffocation. The *oeſophagus* in ſome was ſphacelated down to the ſtomach; the *aſpera arteria*, in others, to the lungs. As theſe could only breathe in an erect poſition; ſo thoſe could ſwallow nothing when the parts were ſo affected. The noſtrils diſcharged a fetid ichor, ſometimes mixed with blood; and ſometimes blood alone, without mixture. This bleeding at the noſe ſeemed at firſt, in one caſe, to give relief; but the patient ſoon after died *. Mercatus relates an inſtance of a child that had the diſeaſe, in which the acrimony of the humour diſcharged from the ulcers was ſo great as to inflame the nurſe's breaſt, and brought on a mortification. He alſo tells us, that the father of the child whoſe caſe is deſcribed above, having frequently put his finger in the child's mouth, to draw out the viſcid phlegm, had his finger

* Severin. p. 440.

inflamed, and was ſeized with the ſame diſtemper †.

Theſe were the ſymptoms in general, and they judged of the event by the mildneſs of their progreſs, or the contrary: tho' it was agreed, that nothing could be more fallacious than this diſeaſe; and that the moſt experienced were often deceived in their prognoſtic.

If the redneſs of the *fauces* above deſcribed, which appeared at firſt being ſeized, was ſucceeded by an ulceration, without any of that whiteneſs (which for the future I ſhall call ſloughs), if the ſwelling about the neck and throat was not large, if the patient diſcharged by the mouth conſiderable quantities of thin pituitous matter, if the breath was

* —erat quidem dira humoris conditio adeo pernicioſa, efficax et contagioſa, quod digitum patris indicem, quo extrahebat eum ſuccum ab ore filii, mordicaret, et in ruborem moveret cum dolore: tandem mox pater conquerebatur de difficultate reſpirandi et deglutiendi cum dolore et tumore faucium, ac ſaturato colore, et glandulis extra apparentibus juxta mentum. Ex quibus ſecundo die halitum prave olentem expirabat; ita ut jure optimo poſſis colligere, contagio filii patrem fuiſſe affectum. Mercat. Conſ. p. 139.

not fetid, and the patient had no diſguſt to his food, if the eyes retained their proper luſtre, all was judged to be ſecure.

On the other hand, if the luſtre of the eyes was conſiderably faded *, if the external oedematous tumour was very large, if the breath ſtunk, if the *fauces* were livid or black, with a coma or delirium, if with theſe the patient had an averſion to his nouriſhment, and his breathing became difficult or laborious, the danger was judged to be extreme.

It was not obſerved that the diſeaſe had any ſtated criſis; or that the ſigns of recovery, or death, appeared on any certain day. Some died on the firſt, others on the ſecond, third, and on every day, to the ſeventh; tho' the greateſt part died before the fourth †. Thoſe who ſurvived the fourteenth were

* Hoc unum ſalutis eſt indicium vel interitus: dum oculorum nitor adſervatur, ſalutis ſpes ſemper adeſt; quo tempore hic deperiit, in propinquo mors eſt. Ætii Cleti Op.

† —indies magis ac magis haec accidentia creſcunt, donec breviſſimo tempore laborantium majorem partem perimat, idque non raro intra quartum diem. Merc. p. 137.

thought

thought to be out of danger, at leaſt from the diſeaſe itſelf *; though ſome dropped off unexpectedly, after a much longer reprieve †.

The conſequences of this diſeaſe were often felt a long time after it had ceaſed. An exceſſive languor and weakneſs continued for many months; and the voice or deglutition was frequently affected, ſo as to be perceivable in ſome almoſt a year after ‡.

It was however obſerved, that notwithſtanding the diſeaſe moſt frequently was accompanied with ſymptoms of peſtilential malignity, yet it ſometimes appeared with a much more favourable aſpect; its progreſs not being ſo quick, nor its ſymptoms ſo violent and dangerous, as hath here been deſcribed to be the caſe in general §. At its firſt breaking out in any place, it was commonly

* Ætii Cleti Op. de Morbo ſtrangulatorio.

† Quinimo poſt xxx dies, et xl. jam praerepti morbi furoribus, praeter omnium opinionem ex improviſo ſunt extincti. Adeo ſcil. latitans et recondita veneni vis eſt. Severin. p. 440.

‡ Æt. Clet.

§ Severin.

the

the moſt ſevere; it then ſpared no age or ſex, but ſwept off adults together with infants *. By degrees it became leſs violent, and at length either wholly diſappeared, or was of ſo little conſequence as to be diſregarded.

We are directed, by moſt of the authors I have ſeen, to begin the cure of this diſtemper, whenever we are called in time, with evacuations, the chief whereof are bleeding and purging: which of the two ought to precede, was not a little diſputed; but it was on all hands agreed, that unleſs theſe remedies were very early applied, as they were principally uſeful by way of revulſion, they were not only of no advantage to the patient, but highly injurious †. Obſervations of this

* —ut peſtis more in citiſſimam mortem pueros et adultos deducat. Merc. Conſult. p. 135.

† ——diſputare coepimus de ſanguine extrahendo: "ſiquidem non defuerunt medici, qui id renuerunt:" caeterum unanimi conſulentium conſenſu, primo die ſanguinem miſimus, cruribus ſcarificatis, et mox octava noctis hora brachiis, aut ſi ultra duos annos fuerit natus, ex vena brachii: "in hoc malo plurimum vereri oportet, vires plurimum dejicere." Mercat.

Breviſſime ſecandam eſſe venam in hoc confitentur omnes. P. Mich. de Heredia de Morb. acut. p. 101.

kind,

kind, we are told *, induced ſeveral phyſicians to omit bleeding entirely; and it was, probably, the reaſon why thoſe who were friends to veneſection ordered it more ſparingly in this than in moſt other acute diſeaſes †. Severinus, who was by no means a timid operator, orders from four to eight ounces to be taken away; which, conſidering the common practice in thoſe countries, is a very ſmall quantity ‡.

* Circa quod praeſidium (venaeſectionem) in pueris exequendum, conſulo ne differatur, quia ejus occaſio ſolum eſt, antequam fluxio in partibus contenta ad putredinem commigret. Nam tunc temporis, ſi ſanguinem fuderis, ſummopere laedes, quae cauſa fuit quod multi medicorum, viſo hoc damno, renuerint ſanguinem mittere. Mercat. Conſult. p. 138.

† In hoc ſacro igne non mittendus eſt ſanguis in ea quantitate ac in angina exquiſita.—Placuit quibuſdam in hoc morbo ſecare venas ſub lingua; alii admoverunt hirudines collo; mihi nulla iſtarum evacuationum unquam probari potuit. Nam cum tumor ſuperveniens ex ſanguine non oritur, fruſtra adhibentur ea auxilia quae ad ſanguinem ex parte affecta evacuandum excogitata fuerunt. Sgambat. de Peſt. Faucium Affect.

Eſſe vero efficiendas parcas miſſiones in quantitate, dum revellere intendimus, docuit antiquitas.—Quod praeceptum magis obſervandum in morbo praeſenti, in quo nimis timemus virium jacturam. Copioſa enim ſanguinis miſſio, praeterquam quod minus proprie revellit, dejecit vires. P. M. de Heredia, ubi ſupra.

‡ Severin. ubi ſupra.

Some

Some not only gave the precedence to purging, but imagined it alone was ſufficient; alledging as a reaſon for it, that ſome children have recovered where this evacuation only had been employed; whilſt bleeding had been injurious, by leſſening the ſtrength *. Purging was however commonly allowed the ſecond place by thoſe who were advocates for bleeding, but under the like reſtrictions †. They generally made uſe of manna, rhubarb, ſenna, tamarinds, ſyrup of roſes, and the like, for this purpoſe. But it was always inculcated, that, in directing theſe evacuations, the patient's ſtrength was eſpecially to be regarded; ſince whatever diminiſhed this, in the end was undoubtedly prejudicial ‡.

Severinus orders an antimonial vomit to be given at the firſt attack, and a cooling

* —hoc ſolo praeſidio aliquando viſum fuit, pueris ad integram ſanitatem recuperandam ſufficere, ſicut aliis ſanguine detracto, vires plurimum fuiſſe dejectas. Merc. Conſ. p. 138.

† Quod evacuandum morbus expoſcit, evacuetur breviſſime. Idem, p. 102.

‡ —in morbis malignis breviter deſtruentibus vires, at poſcentibus ſimul robur animalis virtutis ad ſui ſanationem, multum evacuare non licet. Heredia, p. 102.

gently

gently aſtringent gargle to be uſed night and day. He then orders a clyſter, takes away ſome blood from the jugular, and gives from fifteen to twenty-one grains of bezoar mineral twice a-day, or oftener, as occaſion requires, with thin diluting liquors, in order to raiſe and promote a moderate ſweat. He gives five or ſix grains of the ſame medicine to children at the breaſt, and commends it highly. He ſcarifies the diſcoloured parts in the *fauces*, in order to let out the corroſive virus; a practice which, though it was recommended by the Spaniards §, was diſliked by ſome of the moſt eminent Italians †.

Cupping, with ſcarification, was univerſally approved, and commonly practiſed. Leeches were alſo applied, by way of revulſion, to different parts.

Conſiderable benefit was expected from ligatures made on the extremities, and from

§ Si vero malum non miteſcat, ſed gravius affligat partem, quod conſtabit ex lucido aut nigro colore, vel ex nimia mollitudine—cum intolerabili foetore, ſcarificabitur profunde, prout partis natura tulerit. Heredia, p. 105.

† Cort. Miſcel. p. 697.

chafing

chafing the limbs with the hand, or a cloth; alſo from cupping without ſcarification; apprehending that a revulſion from the parts affected was by this means procured; and that ſome portion of the morbific matter was carried off by the pores of the ſkin.

Some of the Spaniſh phyſicians recommended veſicatories of cantharides, and other acrid or cauſtic ſubſtances, to be laid on each ſide of the neck; but they had not the ſame opinion of their uſefulneſs, when applied to the back or ſhoulders. Heredia expreſsly tells us, that he had ſeldom found any benefit from them *. Neither do the Italian phyſicians ſeem to have been fond of them; the progreſs of the diſeaſe was, in their opinion, too ſwift to admit of any relief from either cauſtics or veſicatories †, both of which had been made uſe of in Spain ‡.

To moderate the continual and malignant fever which accompanied this diſeaſe from

* Multi etiam veſicatoria conſulunt ſpatulis applicata.—Quod auxilium parum prodeſſe ſemper vidi. Heredia, p. 108.

† Sgambat.

‡ Heredia, ubi ſupra.

the

the firſt, and which was thought by ſome to be only ſymptomatical, and had therefore the laſt place in their conſideration *, they had recourſe to ſuch internal medicines as were deemed cordial and alexipharmac. Armenian bole, bezoar both animal and mineral, and, according to the philoſophy of thoſe times, the precious ſtones were reckoned of this claſs. Of vegetable products, the juices of citrons, lemons, oranges, pomegranates, and ſorrel; vinegar, the juice and decoctions of borage, bugloſs, *Carduus Benedictus*, endive, ſcabious, ſcorzonera, ſcordium, with many others of the like nature, were recommended. But a decoction of the contrayerva root was in the higheſt eſteem in this diſeaſe, both as an alexipharmac in general, and for its peculiar efficacy, when applied as a gargle; to which Mercatus, from his own repeated obſervations, gives a very ample teſtimony †.

* Febris etiam continua ſtatim in initio apparet, ſymptomatica quidem. Heredia, p. 97.

† Hoc unum obſervantiſſimum habeo, nimirum omnes oris et gutturis collutiones efficere ſupra decoctum ejus celeberrimi medicamenti, quod medici Hiſpani Contrayerva nuncupant, maxime ſi mucoſa et viſcida pituita abundaverit. Mercat. Conſult. p. 138.

But

But as they found from experience, that no regular criſis or concoction of the humours was to be waited for; that no evacuations, except by way of revulſion, after the acceſs, were of uſe *, they began to conſider the diſeaſe as local, as a particular † morbid affection of the *fauces*, and applied themſelves chiefly to topics, without laying much ſtreſs on internals.

In this part of their directions they have therefore been more explicit; and ſome of them, in order to point out their applications with more propriety, have divided the courſe of this diſeaſe into four different periods ‡.

The firſt they called the ſtate of inflammation. In this, mild repellents were thought neceſſary; ſuch as vinegar in barley-water, juice of the pomegranate, ſyrup

* —Experimento monſtratur, quamcunque evacuationem per alvum, aut ſudorem inutilem eſſe et nocivam, quia cum non proſit, neceſſario debilitat. Hered. p. 100.

† Corteſ. Miſcel. p. 703.

‡ Sgambat. de Affectu Faucium peſtilente.

of roſes, mulberries, purſlain, or a decoction of barley, red roſes, liquorice, and plantain; to two pounds of which were added *acet. roſar.* ℥j. ſs. *ſyr. Diamor.* ℥j. *M* *. If it was required yet more repellent, a ſmall quantity of allum was added.

The ſecond ſtage is that wherein the white ſloughs begin to appear, which is a ſtep towards a gangrenous colliquation. In this they ordered mild abſtergents and antiputreſcents; ſuch as a decoction of lupins, beans, vetches, with honey of roſes †.

The third is, when the ulcers appear foul and ſordid, and begin to look black, a real mortification being come on, ſometimes penetrating to a conſiderable depth, with great putrefaction. More powerful aſtringents and exſiccants were requiſite in this caſe; ſuch as powder of myrrh, and a little allum mixed with honey, or honey of roſes; bole diſſolved in treacle-water; a ſolution of *un-*

* Heredia, p. 105.

† Idem, ibid.

guent.

guent. Ægyptiacum in barley-water was alſo much in uſe*. Allum, ſulphur, copperas, verdigreaſe, oil of vitriol, oil of ſulphur, ſpirit of ſalt alone, or mixed, or diluted in different liquors, were much employed. In this caſe, ſometimes the acid ſpirits were dexterouſly applied to the parts affected, by means of an armed probe; but they were oftener diluted with ſyrup or honey of roſes, and in children poured into the mouth.

Though many had recourſe to theſe powerful remedies, and even to arſenic itſelf, yet the moſt experienced were juſtly afraid, that the uſe of ſuch cauſtic and acrimonious applications was often attended with pernicious conſequences, both to children and adults; and they are therefore, with good reaſon, condemned by Mercatus †.

* Celebris utiliſſimaque eſt unguenti Ægyptiaci lotura: ſumuntur quidem ʒij. et infunduntur in ℥ij. aquae hordei, plantaginis, vel ſeri lactis: poſt infuſionem percolatur per linteum, et colatura tangitus ulcus. Idem, ibid.

† Ego quidem arbitror, plures pueros interfeciſſe uſum horum medicamentorum, quae cauſtica ſunt, quam affectionem ipſam. Merc. Conſult. p. 139.

— compertum habuimus in hoc viro, et aliis laborantibus, haec cauſtica inflammationi et ulceri ſummopere eſſe nocua: ſuppurantia corruptioni. Id. p. 40.

Nevertheleſs ſome went ſo far as to adviſe the actual cautery, if the potential ones did not ſucceed, and gave directions for the time and manner of their application * ; but as this operation will be liable to all the objections made to the former, to have mentioned it will, I imagine, be thought ſufficient.

Tho' the author laſt quoted adviſes us to ſcarify the black or livid cruſts or ſloughs, yet he gives us a caution not to tear them off, or forcibly to ſeparate them, as the conſequences would be an encreaſe of pain and inflammation ; whence the ulcers would ſpread, and at the ſame time eat deeper †.

In the fourth ſtage the putrefaction is ſuppoſed to be extinguiſhed, the mortified parts caſt off, and an ulcer only remains. In this caſe, the fume of white amber thrown on live coals, and received into the mouth, as a *ſuffitus*, was adviſed ; alſo the *vinum myrrhites*, a decoction of guaiacum, roſes, balauſtines, pomegranate-peels, by way of gargle ;

* Heredia, p. 106.
† Idem, p. 109.

medicines that were ſuppoſed to dry with ſome degree of aſtringency.

Such was the appearance of the *Angina maligna*, or ulcerated ſore throat, at its firſt being taken notice of in Europe; and ſuch were the methods of treating it then in uſe. In this recital I have been the more prolix, inaſmuch as the diſeaſe deſcribed in the following pages, is the ſame with the *Angina maligna* of theſe writers, with whoſe experience and obſervations it may doubtleſs be of uſe to us to be acquainted.

PART II.

Of the SORE THROAT *attended with* ULCERS;

As it has appeared in THIS CITY and Parts adjacent.

ACCORDING to the information I have received from ſeveral eminent perſons of the Faculty, it was in the year 1739, that a diſeaſe was firſt taken notice of, which was thought to be the *Morbus ſtrangulatorius*, already deſcribed, and which differed in no eſſential circumſtance, as far as I can learn, from the diſtemper which is the ſubject of this treatiſe.

The ſudden death of two children in a family of diſtinction, and of ſome others near the ſame part of the town, whoſe complaints

plaints had chiefly been of a ſore throat, ſeem to have occaſioned this ſuſpicion: but as very few caſes of the like nature occurred after theſe, or, if they happened, paſſed unobſerved, little mention was made of it during ſeveral years.

It began however to ſhew itſelf again in 1742, but not in ſo general a way as to render it the ſubject of much public diſcourſe; for tho' ſuch of the Faculty as were in the moſt extenſive practice met with it now and then, in the City eſpecially, it remained unknown to the greateſt part of practitioners, till within theſe two or three years, in which time its appearance has been more frequent, both in town and the villages adjacent.

I am informed, that in the winter of 1746, ſo many children died, at Bromley near Bow in Middleſex, of a diſeaſe that ſeemed to yield to no remedies or applications, that ſeveral of the inhabitants were greatly alarmed by it; ſome loſing the greater part of their children, after a few days indiſpoſition. Some others of the neighbour-

ing places were affected at the ſame time with the like diſeaſe; which, from all the accounts I have met with from thoſe who attended the ſick, was that here treated of. I am informed likewiſe, that it raged at Greenwich about the ſame time *. It ſtill continues in this City, and ſometimes ſhews itſelf in the villages about it, tho' at preſent with ſo mild an aſpect as ſeldom to prove fatal; unleſs the ſubject is very unfavourable, or the diſeaſe hath been neglected, or improperly treated at the beginning; which circumſtances, tho' of ſome importance in all caſes, yet are of the utmoſt in this; as a wrong ſtep at the firſt may put it out of the power of art to afford relief.

Tho' this diſeaſe has now been amongſt us ſeveral years, and has conſequently ſur-

* The Reader may be pleaſed to take notice, that the facts contained in the following narrative, where the contrary is not expreſsly mentioned, have all come under the Author's obſervation, who has endeavoured to relate what he has ſeen, and in ſuch a manner as he thought would beſt contribute to public advantage. It may alſo be neceſſary to obſerve, that the diſeaſe is deſcribed as it appeared in 1747 and 1748, that if the ſymptoms ſhould hereafter vary in any circumſtance, the diverſity may be attributed to the nature of the diſtemper, and not imputed to deſign or inattention.

vived

vived the different ſeaſons, and all the variety of weather to which we are expoſed, yet it ſeems to ſhew itſelf moſt frequently in autumn and the beginning of winter; at leaſt I have met with many more caſes from September to December incluſive, than in all the other months together.

It may likewiſe be remarked, that the ſummers of 1747 and 1748 were dry, with ſome days in each uncommonly hot, for this climate; the mercury in Fahrenheit's thermometer riſing in the ſhade, and within doors, one day to 78, and during ſeveral to 75 and 6. The autumns of the ſame years were as unuſually temperate and warm; the wind continuing longer in the ſoutherly points than has often been known at this ſeaſon.

In this country, as well as in thoſe where the *Angina maligna* was firſt taken notice of, children and young people are more expoſed to it than adults: a greater number of girls have it than boys; more women than men; and the infirm of either ſex are more liable to have the diſeaſe, and to ſuffer from it, than

than the healthy and vigorous: I have ſeen but few adults of this conſtitution affected by it, and not one who died of it.

When it breaks out in a family, all the children are commonly affected with it, if the healthy are not kept apart from the ſick; and ſuch adults as are frequently with them, and receive their breath near at hand, ſeldom eſcape ſome degree of the ſame diſeaſe.

It generally comes on with ſuch a giddineſs of the head as commonly precedes fainting, and a chilneſs or ſhivering like that of an ague-fit: this is ſoon followed by great heat; and theſe interchangeably ſucceed each other during ſome hours, till at length the heat becomes conſtant and intenſe. The patient then complains of an acute pain in the head, of heat and ſoreneſs, rather than pain, in the throat, ſtiffneſs of the neck, commonly of great ſickneſs, with vomiting, or purging, or both §. The face ſoon after looks red and ſwelled, the eyes

§ The vomiting and purging were but ſeldom obſerved to accompany this diſeaſe, at its firſt appearance amongſt us, as I have

inflamed and watery, as in the meaſles; with reſtleſſneſs, anxiety, and faintneſs.

This diſeaſe frequently ſeizes the patient in the fore part of the day: as night approaches, the heat and reſtleſſneſs increaſe, and continue till towards morning; when, after a ſhort diſturbed ſlumber (the only repoſe they often have during ſeveral nights) a ſweat breaks out; which mitigates the heat and reſtleſſneſs, and gives the diſeaſe ſometimes the appearance of an intermittent.

If the mouth and throat be examined ſoon after the firſt attack, the *uvula* and *tonſils* appear ſwelled; and theſe parts, together with the *velum pendulum palati*, the cheeks on each ſide near the entrance into the *fauces*, and as much of them, and the *pharynx* behind, as can be ſeen, appear of a florid red colour. This colour is commonly moſt

I have been informed by ſome phyſicians of eminence, who ſaw it early; but it is generally agreed, that theſe ſymptoms almoſt conſtantly attended, in the manner here deſcribed, during the years 1747 and 1748, the time in which theſe obſervations were collected: and I have ſince found, that the above-mentioned ſymptoms have not ſo regularly appeared as at that time.

obſerv-

obſervable on the poſterior edge of the palate, in the angles above the *tonſils*, and upon the *tonſils* themſelves. Inſtead of this redneſs, a broad ſpot or patch, of an irregular figure, and of a pale white colour, is ſometimes to be ſeen, ſurrounded with a florid red; which whiteneſs commonly appears like that of the gums immediately after having been preſſed with the finger, or as if matter ready to be diſcharged was contained underneath.

Generally on the ſecond day of the diſeaſe, the face, neck, breaſt, and hands, to the fingers ends, are become of a deep eryſipelatous colour, with a ſenſible tumefaction; the fingers are frequently tinged in ſo remarkable a manner, that, from ſeeing them only, it has not been difficult to gueſs at the diſeaſe.

A great number of ſmall pimples, of a colour diſtinguiſhably more intenſe than that which ſurrounds them, appear on the arms, and other parts. They are larger, and more prominent in thoſe ſubjects, and in thoſe parts

parts of the ſame ſubject, where the redneſs is leaſt intenſe; which is generally on the arms, the breaſt, and lower extremities*.

As the ſkin acquires this colour, the ſickneſs commonly goes off, the vomiting and purging ceaſe of themſelves, and rarely continue after the firſt day.

The appearance in the *fauces* continues to be the ſame, except that the white places become more aſh-coloured; and it is now diſcoverable, that what at firſt might have been taken for the ſuperficial covering of a ſuppurated tumour, is really a ſlough, concealing an ulcer of the ſame dimenſions.

All the parts of the *fauces* above-mentioned are liable to theſe ulcerations; but they generally are firſt diſcernible in the angles above the *tonſils*, or on the *tonſils* them-

* The redneſs and eruption have not accompanied this diſeaſe ſo regularly, during the latter part of this winter †, as they did in the preceding ſeaſons: in ſome caſes they did not appear at all; in others, not till the third or fourth day; and, as I have heard, in ſome not till the fifth, and even later.

† 1754.

ſelves;

ſelves; though they are often to be ſeen in the arch formed by the *uvula* and one of the *tonſils*; and alſo on the *pharynx* behind, on the inſide of the cheeks, and the baſe of the tongue, which they cover in the manner of a thick fur. Inſtead of theſe ſloughs, where the diſorder is mild, a ſuperficial ulcer, of an irregular figure, appears in one or more of theſe parts, ſcarce to be diſtinguiſhed from the ſound, but by the inequality of ſurface it occaſions.

The parotid glands * on each ſide commonly ſwell, grow hard, and are painful to the touch; if the diſeaſe is violent, the neck and throat are ſurrounded with a large œdematous tumour, ſometimes extending itſelf to the breaſt; and, by ſtraitening the *fauces*, increaſes the danger.

Towards night, the heat and reſtleſſneſs increaſe, and a *delirium* frequently comes on.

* Heredia takes notice of the ſame ſymptoms, and aſſigns a very probable reaſon for it.—In Angina maligna non tument externa, quia in illas ex externis tranſlata materia fuerit, ſed quia ita adimplentur interna, ut materiam fluentem non capiant, et ſic ad externa dilabitur. Heredia, p. 99.

This

This ſympton, which appears in ſome even on the firſt night, ſeems to differ conſiderably from the like affection in other diſeaſes. The ſick commonly anſwer the queſtions put to them properly, but with an unuſual quickneſs; they talk to themſelves incoherently when left alone, and frequently betray the firſt tendency to this diſorder, by affecting too great a compoſure: This, for the moſt part, happens to thoſe who ſleep but little; for ſome are comatous and ſtupid, and take little notice of any thing that paſſes.

In this manner they continue during two, three, or more days; they commonly grow hot and reſtleſs towards the evening: which ſymptoms and the *delirium* increaſe as night comes on; a ſweat more or leſs profuſe breaks out towards morning; and from this time they are eaſier during ſome hours; a faintneſs only continuing, of which they frequently complain more than of the reſt of their ſufferings.

The diſeaſe ſeems to have no ſtated period which can properly be called its Ἀκμὴ, or

height. Some grow eaſier from the firſt day of the attack; but, in general, the ſymptoms of recovery appear on the third, fourth, or fifth day, and proceed in the following manner:

Firſt, The redneſs of the ſkin diſappears; the heat grows leſs; the pulſe, which was hitherto very quick, becomes ſlower; the external ſwellings of the neck ſubſide *; the ſloughs in the *fauces* caſt off; the ulcerations fill up; the patient ſleeps without confuſion, is compoſed when awake, and his appetite begins to return.

The pulſe, during the whole courſe of this diſeaſe, is generally very quick; frequently 120 ſtrokes, or more, in a minute: In ſome it is hard and ſmall; in others ſoft and full, but without that ſtrength and firmneſs which uſually accompany equal quickneſs and heat, in genuine inflammatory diſorders.

* At leaſt, of all the parts about the neck, except the parotids themſelves; which ſometimes continue ſwelled and hard a long time after the other ſymptoms abate, and at length ſuppurate.

If

If a vein be opened ſoon after the diſtemper is come on, the blood generally appears of a freſh florid red; the *craſſamentum* is rather of a lax gelatinous texture, than denſe or compact; the *ſerum* yellow, and in a large proportion *.

The urine is at firſt crude, and of a pale whey-colour: as the diſeaſe advances, it turns yellower, as if the bile was diluted in it; and, ſoon after the patient ſhews any marks of recovery, it commonly grows turbid, and depoſits a farinaceous ſediment.

They ſeldom have any ſtools, if the ſymptoms are favourable, from the time when the purging, which generally attends the acceſſion, ceaſes. This diſcharge is frequently bilious and without any pain: tho' theſe evacuations differ in different habits.

They complain of thirſt commonly leſs in this than in other acute diſeaſes. The

* But it is often fizy when the diſeaſe has continued two or three days; and in ſome inſtances which lately occurred, it was ſo ſoon after the firſt attack.

tongue is generally moiſt, and not often furred: in ſome nevertheleſs it is covered with a thick white coat or fur, and theſe generally complain of foreneſs about the root of the tongue.

The *uvula* and *tonſils* are ſometimes ſo much ſwelled, as to leave but a very narrow entrance into the gullet, and this entrance frequently ſurrounded with ulcers or ſloughs; yet the patients often ſwallow with leſs difficulty and pain than might be expected under ſuch circumſtances *.

They frequently complain, ſoon after they are taken ill, of an offenſive putrid ſmell affecting their throats and noſtrils, which oft occaſions ſickneſs before any ulcerations appear.

In thoſe who have this diſeaſe in a ſevere manner, the inſide of the noſtrils, as high up as can be ſeen, frequently appears of a

* I have ſeen many caſes, where theſe glands were ſo enlarged, as to force back through the noſtrils moſt part of what was attempted to be ſwallowed.

deep

deep red, or almoſt livid colour: after a day or two, a thin corroſive *ſanies*, or with it a white putrid matter, of a thicker conſiſtence, flows from them, which is ſo acrid, as to excoriate the part it lies upon any conſiderable time. This is moſt obſervable in children, or in young and very tender ſubjects, whoſe lips likewiſe are frequently of the colour above mentioned, and covered on the inſide with veſicles containing a thin *ichor*, which excoriates the angles of their mouths, and the cheeks where it touches them.

It is probable, that part of the ſame acrid matter paſſes with the nouriſhment into the ſtomach; eſpecially in children; and it is perhaps owing to this cauſe in part, that they ſuffer much more from the diſtemper than adults; this corroſive fluid, without doubt, producing the ſame effects on the ſtomach and bowels, as it does when applied to the much leſs ſenſible ſkin of the face; *i. e.* it excoriates the parts it touches; which, in fact, ſeems to be the caſe: for, if they get over this ſtage of the diſorder, a

purging ſometimes ſucceeds, attended with the ſymptoms of ulcerations in the bowels; and after enduring great pain and miſery, perhaps ſome weeks, they at length die emaciated. I have been informed, that ſome children have had the parts about the *anus* excoriated *; the *ſanies* retaining its virulency through the whole tract of the inteſtines.

The ſick ſometimes bleed at the noſe towards the beginning of the diſeaſe; and the *menſes* very often appear in thoſe of the female ſex who are of age to have them, ſoon after they are ſeized, notwithſtanding the regular period is at a conſiderable diſtance: If they are taken ill about the uſual ſeaſon, the diſcharge is commonly greater than it ought to be. Some young perſons, who never had the leaſt appearance of them, have had this evacuation during their illneſs.

* Some adults, who have had the diſeaſe in a violent degree, have ſuffered very much from the ſame cauſe: emollient mucilaginous liquids taken plentifully, and alſo applied externally, by way of fomentation, to the part affected, frequently give ſpeedy relief.

In ſtrong and full habits, theſe evacuations are ſeldom attended with much benefit, or with manifeſt ill effects, unleſs they are very copious; for in this caſe they occaſion great faintneſs, and an increaſe of the other ſymptoms, in proportion to the exceſs. In tender weak ſubjects they are often prejudicial.

It has happened in this diſtemper, that hæmorrhages from the noſe and mouth have ſuddenly carried off the patient. I have heard of the like accident from bleeding at the ear: but theſe fatal diſcharges moſt commonly happen after the patient has been ill ſeveral days; and it ſeems more probable, that they proceed from the ſeparation of a ſlough from the branch of an artery, rather than from a fulneſs of the veſſels, or an effort of nature to relieve herſelf by a ſalutary criſis*.

* This I find was alſo Heredia's opinion, who conſiders a diſcharge of blood, either from the mouth or noſe, as a ſign of the utmoſt danger.—Malignam ſignificationem praebet ſegnis ſanguis ſtillans e naribus; ex corroſione quippe vaſorum, et putrilagine emanat, innuitque certiſſimam mortem, quia putredo interne cohiberi non poteſt:—ideo periculoſiſſimus cenſetur ſanguinis fluxus ex naribus aut ore. Quidam cum

Bleeding in this diſeaſe has in general been obſerved to be prejudicial: Some indeed admit of it at the firſt attack, without any ſenſible inconvenience; but a repetition of it, even where the diſeaſe is mild and favourable, ſeldom fails to aggravate the ſymptoms; and in ſome caſes it appears to have produced very fatal conſequences. The heat, reſtleſſneſs, delirium, and difficulty of breathing, which this evacuation commonly prevents or mitigates in other caſes, in this are increaſed by it; nor does the ſwelling of the *tonſils*, *fauces*, &c. ſeem to receive the leaſt benefit from it: on the contrary, though the fulneſs of theſe parts decreaſes, yet the ſloughs thicken, and change to a livid or black colour, the external tumour grows large, and the ſpitting commonly diminiſhes †.

hoc ſigno nullum vidiſſe liberatum docent: nos vero unicum ſolum ægrotum ſumma diligentia a tanto periculo vindicavimus. Heredia, p. 100. Of three whom I attended, and who had this ſymptom, two recovered: the third died of a bleeding at the noſe, before any aſſiſtance could be procured.

† The heat indeed and quickneſs of the pulſe ſeem at firſt to be affected by this evacuation, but they commonly return after a fallacious reſpite with greater violence; the patient is ſeized with a difficulty of breathing, falls into cold ſweats, a ſtupor, and dies ſuddenly.

Nor

Nor has purging been obſerved to be more beneficial: gentle cathartics have brought on very dangerous ſymptoms. Upon procuring a few ſtools with manna, eſpecially when the diſeaſe has continued two or three days, the redneſs of the ſkin has diſappeared, and the flux to the throat has been ſurpriſingly increaſed: If it happens that this diſcharge by ſtool continues, the ſwelling of the neck commonly grows larger; the *fauces* become flaccid, dry, and livid; and the patient in a few hours after this expires: ſo that purgatives ſeem to have no better effects in diminiſhing the tumour, and abating the ſuppoſed inflammation, than bleeding.

Nitrous cooling medicines frequently produce the like effects; they increaſe that faintneſs which accompanies this diſeaſe, and either diſpoſe the patient to copious ſinking ſweats, or to ſtools.

Upon the whole it appears, that all evacuations which tend to leſſen the natural ſtrength of the conſtitution, are in this diſeaſe injurious; and that thoſe perſons in com-

mon are in the greateſt danger, if attacked with it, who have been previouſly indiſpoſed, or have had their ſtrength impaired by grief, or any other accident. Of which it may not perhaps be improper to relate an inſtance or two in this place, as it will alſo tend to explain the uſual progreſs of the ſymptoms in the worſt caſes we meet with.

A young gentlewoman about 26 years of age, of a pale lax habit, but of an active chearful diſpoſition, had enjoyed a pretty good ſhare of health in common, till a year or two before her laſt illneſs; about that time ſhe unhappily made uſe of ſome external and empirical application to remove a redneſs attended with pimples, which now-and-then broke out in her face. She was ſoon relieved from this complaint by the medicine ſhe uſed; but was quickly after ſeized with ſickneſs, vomiting, loſs of appetite, and either an obſtinate coſtiveneſs, or a troubleſome diarrhœa; the *menſes* were pale, and in ſmall quantities; and her health in general was greatly impaired.

She

She had ſcarce recovered from this weak ſtate, when the death of a near relation brought her almoſt into the ſame circumſtances; from which ſhe was ſlowly recruiting, when ſhe married. Her ſickneſs, vomiting, and loſs of appetite, ſoon returned; which ſhe concealed as much as poſſible.

Under theſe diſadvantages, ſhe was ſeized with this diſtemper, a day or two after ſhe had viſited an acquaintance labouring under the ſame diſorder: it came on with a coldneſs and trembling like that of an ague-fit, great faintneſs, and an acute pain in her head, with a vomiting more violent than ſhe was uſually affected with, and a purging. Towards evening ſhe grew very hot and reſtleſs, complained of a ſoreneſs in her throat, and the diſcharges abated. Her face, neck, and hands were intenſely red: ſhe frequently ſighed, and from her aſpect and geſtures there was reaſon to ſuſpect a delirium approaching. She ſlept little that night; and next morning her pulſe, which before was very quick and ſmall, ſeemed to be ſomewhat

what more full, but not ſenſibly ſlower; and ſhe complained of faintneſs and anxiety. The parts about the *fauces* were much relaxed, very red, in ſome places almoſt livid, with a kind of gloſſy dryneſs upon them. She continued in this manner, without any remarkable encreaſe of ſymptoms, till night, when the looſeneſs returned, and in a very ſhort time exhauſted her ſtrength to a great degree: the redneſs upon the ſkin diſappeared, the extremities grew cold, her eyes became dim, her pulſe ſcarce perceptible, ſhe breathed with difficulty, and expired in the morning, on the third day of the diſeaſe.

Another young woman, who frequently viſited, and ſometimes aſſiſted, a relation who had this diſeaſe, was attacked with it in the uſual manner. She was about 17, of a pale and ſomewhat bloated lax habit, naturally inactive, averſe to exerciſe, and was thought to have indulged ſome painful ſolicitude, to the prejudice of her health, and making way for an obſtinate chloroſis.

Under

Under theſe circumſtances ſhe was ſeized with the uſual complaints, but in a violent manner. The purging continued till the day following; when it yielded for a time to the power of opiates; but conſtantly returned when their effects were over. The other ſymptoms, ſuch as heat, reſtleſsneſs, anxiety, and faintneſs, encreaſed with the purging; the pulſe was ſmall, quick, and hard; a difficulty of breathing came on, the ſmall remains of luſtre in the eye periſhed, and ſhe died early on the fourth day of the diſtemper.

No marks of any ſloughs in the throat appeared in either of theſe caſes; but the redneſs became daily more intenſe, and approached nearer to lividneſs, whilſt the *fauces* could be inſpected, which, from the great difficulty they had in breathing, was impracticable, ſeveral hours before the patients expired.

Warm aromatic cordials and anodyne aſtringents were adminiſtered aſſiduouſly, with ſuitable nouriſhment, and veſicatories applied ſucceſſively to the neck, back, and arms, but without effect.

If

If the purging therefore continues long after the firſt exacerbation of the diſeaſe, it may be looked upon as a dangerous ſymptom: for though it be ſometimes reſtrained for the preſent by opiates or aſtringents, yet it commonly returns with more vehemence when their efficacy ceaſes, and in a ſhort time exhauſts the ſmall degree of ſtrength remaining.

In this caſe they generally ſpit very little; the *fauces* appear dry, gloſſy, and livid; the external tumour grows large; they void their excrements without perceiving it, and fall into profuſe ſweats; reſpiration becomes difficult and laborious; the pulſe ſinks; the extreme parts grow cold, and death in a few hours cloſes the ſcene; and in no diſeaſe that I have ſeen, is the eye ſo early deprived of its luſtre as in this; for it is ſometimes opaque or dim ſeveral hours before death; and, as Ætius Cletus hath obſerved, is a fatal preſage of its approach *.

* Heredia's deſcription of the fatal progreſs of this diſeaſe, and the neceſſary cautions he gives in reſpect to the prognoſtic, deſerve particular notice.

Fallaciſſimam eſſe hujus morbi naturam, confitentur omnes. —ulceribus oris, et partium quae viſui exiſtebant conſpicuae, recte

A copious flux of pituitous matter to the glands, and other parts about the *fauces*, ſeemed to be the cauſe of ſudden death, in a girl about 12 years old. She was ſeized in the common way, with ſhivering, head-ach, ſickneſs, vomiting, and purging. The diſcharges abated in a few hours, and were ſucceeded by great heat, redneſs of the ſkin, and a ſore throat; the *uvula*, *tonſils*, and contiguous parts, were red, and ſo ſwelled in eight or ten hours, as to touch each other, and ſeemed to cloſe the entrance into the *pharynx*. She breathed without much difficulty, ſwallowed with leſs pain than could

recte curatis, et ſedata inflammatione aeger periclitatur.—ex eo quod paulatim ſerpit putredo per aſperam arteriam ad cor, aut per gulam ad ventriculum, ſine aliquo dolore, aut febri ſenſibili, cujus ſit habenda cura: et cum medicis auxiliis, ablata fuerint ulcera, et inflammationes ſedatae in partibus viſui patentibus, occulta putredo, paulatim mortificans partes internas, tabe, parviſſimis et debiliſſimis pulſibus extinctione caloris, refrigeratione extremorum, faciei extenuatione, inappetentia perpetua, et moleſta mutatione decubitûs, ſomno fallaci, et apparente, quia vigilandi impotentia, ſomnum verum aemulatur, miſere aegrotantes interficit, ut viſum jam ſit ſubita et inopinata morte periiſſe aliquos,—e lecto ſurgentes, et intra domos ambulantes; ob quod etſi quae vitiata apparebant in faucibus, aut partibus aliis, in melius mutata conſpiciantur, non licet ſalutem polliceri, quia ſolet communicari paulatim putredo, et gangraena partibus internis. Heredia, p. 99.

be imagined, and ſpit up large quantities of phlegm. About ſix in the evening ſhe was ſeized with a difficulty of breathing, as if ſtrangled: thoſe about her raiſed her up, thinking ſhe was in a fit; ſhe recovered herſelf a little, but expired upon being again laid down in bed, in ſomewhat leſs than 24 hours from the firſt attack. A large quantity of viſcid phlegm with which, after ſhe was dead, her mouth appeared to be filled, together with the tumefied *uvula*, *tonſils*, and *velum palati*, had perhaps jointly cloſed the *rima glottidis*, and put a ſtop to reſpiration.

By a fall in her infancy ſhe was reduced to the neceſſity of uſing crutches. She was big-boned, had a good appetite, and, for want of that exerciſe which perſons at her age commonly enjoy, ſeemed to be plethoric. Theſe circumſtances perhaps might contribute to this ſpeedy and unhappy event.

Accidents of the like kind ſeem not to have been uncommon while this diſeaſe con-

tinued in Italy, according to a remark of Corteſius *.

From the preceding account of the Sore Throat attended with Ulcers †, it will, I believe, appear, that this diſeaſe is widely different from a common ſore throat, or ſimple inflammation of any of the parts about the *fauces*; both as to the ſubject commonly affected by it, the manner of its attack, the progreſs of the ſymptoms, and its concluſion: for the ſore throat with ulcers generally attacks children; and of theſe, girls more frequently than boys, as hath been obſerved. If adults are ſeized with it, they are commonly ſuch as have been very much converſant with the ſick, or elſe are weak and infirm: and it ſeems to affect thoſe adults in the ſevereſt manner, who have been pre-

* —Ad praedictarum partium (Uvulae, Tonſillarum) inflammationem ſubſequebatur interdum materia quaedam pituitoſa a capite tam repente et inopinato deſcendens, ut miſeri aegrotantes ſubito ſuffocarentur. Corteſ. Miſcell. p. 697.

† The diſeaſe here treated of is, ſtrictly, "a Sore Throat;" ſince by ſoreneſs we aptly expreſs the uneaſy ſenſation accompanying an ulcer (i. e. a ſore) and not that which attends an inflammation, which is indeed pain, but not properly ſoreneſs.

viouſly indiſpoſed, or whoſe ſtrength has been reduced by unſeaſonable or immoderate evacuations.

On the contrary, the common *Angina*, or an inflammation of the *tonſils*, moſt frequently attacks the healthy, the vigorous, and robuſt; the weak, the delicate, and infirm, are leſs expoſed to it, at leaſt ſuffer leſs from it, than the former.

As both diſeaſes are attended with a fever, and as moſt fevers come on with ſhivering, or chillneſs, this ſymptom may at leaſt appear equivocal: but if ſickneſs, or vomiting, or purging, or an acute pain of the head, towards the back parts or top eſpecially, or if all theſe come on in the ſpace of a very few hours, which they generally do where the diſeaſe is vehement, it may juſtly be eſteemed to be of the putrefactive kind: but if with theſe ſymptoms an eryſipelatous redneſs diſcovers itſelf in the *fauces*, with ulcerations or ſloughs, the diſeaſe is evident.

In ſome caſes, the ſymptoms have been ſo obſcure, that it was difficult to determine to which

which diſeaſe they properly belonged: but in theſe circumſtances they were commonly ſo favourable, that, ſuppoſing the diſorder not to be of the ulcerated kind, no other inconvenience ſeemed likely to enſue from treating it as ſuch, than a ſuppuration; which is often an event rather to be choſen than avoided.

The redneſs of the ſkin in the face, neck, breaſt, and hands, is another obvious and diſtinguiſhing characteriſtic, which in children, and young people eſpecially, ſeldom fails to accompany this diſorder.

In the common ſore throat, a local inflammation is the diſeaſe: all the ſymptoms are derived from this ſource: an acute throbbing pain, greatly encreaſed upon ſwallowing even liquids, is the principal grievance. In the other, the whole habit ſuffers, as if by a *ſtimulus* of a peculiar nature; and although the throat is always more or leſs affected, yet it is ſometimes the leaſt part of the patient's complaint; and inſtances have occurred to

me of conſiderable ſloughs being formed, before any ſoreneſs or pain in the *fauces* hath been mentioned.

Again, this diſeaſe is accompanied with a greater tendency to a delirium, than either a common *Angina*, or almoſt any other diſtemper we are acquainted with. To have this ſymptom appear in the diſeaſe we are treating of on the firſt night, is not uncommon; and on the ſecond, frequent. A girl about eight years of age, whom I attended, was ſcarce known to be indiſpoſed, till ſhe alarmed the family, by appearing to be light-headed. She had made no complaint of her throat, nor was this part thought to be affected, till, upon examination, I found it ſo; being led to ſuſpect it by the colour of her hands, and the delirium. She got well through the diſeaſe, though its progreſs, at firſt, appeared to be very ſwift.

A common ſore throat, if the patient recovers, either goes off by reſolution, or the parts affected ſuppurate, or, if glandular, become hard and ſcirrhous.

In

In that attended with ulcers, none of theſe circumſtances happen; for it terminates in a ſuperficial ulceration of ſome of the parts about the *fauces*, if the diſeaſe is very mild, with little appearance of any ſloughs, and with large and deep ones, of a white cineritious, livid, or black colour, if it is more violent.

It will not perhaps be difficult, from ſuch a comparative view, to diſtinguiſh this diſeaſe from a common ſore throat, or an inflammatory affection of thoſe parts in moſt inſtances: but there is another no leſs certain criterion, tho' too often a fatal one, which is the conſtant encreaſe of ſymptoms upon bleeding, purging, and the liberal uſe of cooling antiphlogiſtic medicines: a method, which, as it ſeldom fails to remove a genuine inflammation, if it is early enough and aſſiduouſly purſued, ſo it is too often injurious in the preſent caſe; an inſtance whereof I think evidently appeared in the following ſubject.

A youth about 14 years old, of a briſk, lively diſpoſition, who had enjoyed a good ſhare of health, ſaving that, for a few years paſt, a cutaneous diſeaſe, a-kin to a leproſy, had ſometimes appeared on his head and arms, was ſeized one morning with a general uneaſineſs, and a diſpoſition to vomit; he was put to bed, and a ſevere ſhivering enſued; his ſickneſs encreaſed, he vomited up every thing, had ſeveral purging ſtools that day, and complained much of his head, with ſome ſoreneſs in his throat. He was ordered to be blooded, and had an emetic given him: this operated but little; he grew hot and reſtleſs, a deep redneſs ſpread itſelf over his face, hands, and arms, with a plentiful eruption of ſmall pimples, which induced thoſe about him to apprehend it was a common ſcarlet fever.

The next day, which was the ſecond of the diſeaſe, his throat continuing ſore, and the feveriſh ſymptoms encreaſing, a purge of manna was given him, which operated gently; and at night his head and throat being more

more uneaſy, his heat ſtill continuing, with a tendency to delirium, a bliſter was applied.

On the third, the ſymptoms not abating, he loſt about ten ounces of blood. He had taken a cooling nitrous powder every four hours; this was now changed for one more cordial. At night he grew delirious, his fever encreaſed, and he had ſome looſe ſtools, which were rather encouraged than reſtrained, as it was hoped they might relieve him. Bliſters were applied to his head and arms.

On the fourth in the morning I was ſent for: I found him delirious, with convulſive twitchings; his hands in conſtant motion, gathering the bed-clothes; his pulſe quick and weak; his tongue parched. With ſome difficulty I looked into the *fauces*; they ſeemed to be pale in ſome places, intenſely red or livid in others, with a gloſſy brightneſs: his excrements came away involuntarily; his eyes were languid and dim: he breathed with difficulty, fell into profuſe clammy ſweats, and died in a few hours after.

In ſome of the firſt caſes I met with, the quickneſs of the pulſe, the degree of heat, the apparent inflammatory redneſs of the eyes and face, and pain in the head, ſometimes urged me to order bleeding, eſpecially if there were any marks of a plethora; but in theſe caſes it did not appear to have any advantageous effects: ſo that, notwithſtanding the vehemency of the ſymptoms above mentioned, it ſeems proper in general to omit this evacuation.

Cupping with ſcarification has been applied to the ſhoulders and back of the head, in order to remove an acute pain of this part, which is often complained of, but, as far as I have been able to obſerve, without much benefit.

It is neceſſary that the patient ſhould keep in bed as much as may be, tho' the diſeaſe ſhould ſeem to be ſlight: it has happened, for want of care in this reſpect, that a purging has come on, the redneſs of the ſkin diſappeared, and a diſorder which, with confinement alone, would probably have gone off in

in twice 24 hours, has been rendered tedious and difficult.

If we are called in at the firſt, while the ſickneſs or vomiting continues, it will be of uſe to promote this diſcharge, by giving an infuſion of green tea, camomile-flowers, *carduus*, or a few grains of *ipecacuanha*. In ſome inſtances, where the attack has been ſevere, and this method practiſed, the diſorder has gone off with more eaſe than was at firſt apprehended.

If theſe ſymptoms do not abate with the operation of the emetic, ſmall draughts of mint-tea, with a ſixth part of red Port added to it, may be given frequently; together with ſome grateful and warm aromatic, cordial medicine, every four or ſix hours. The *Pulvis Contrayervæ ſimp.—comp. Confect. cardiac.——Raleigh. Spec. arom. Vinum croceum*; *Aq. Menth. ſpirit. Aq. Alex. ſpirit. cum Aceto* *; with others of the like nature, may be uſed for this purpoſe.

* Vegetable acids, ſuch as the juice of lemons, oranges, wood-ſorrel, verjuice, vinegar in ſmall doſes, and the like, as they are undoubtedly antiputreſcents, may ſeem to be indicated;

In this diſeaſe, it is at all times neceſſary to attend very carefully to the diarrhoea. For the moſt part it ceaſes with the vomiting, in leſs than twelve hours from the firſt attack: if it continues longer than this period, it is neceſſary to check it, otherwiſe it occaſions great faintneſs, ſinks the ſtrength, and in the end produces very dangerous conſequences. The aromatic cordials above mentioned, if they are given plentifully, commonly take off this ſymptom, as well as the vomiting; but if they prove ineffectual, recourſe muſt be had to aſtringents and anodynes, in proportion to the exigence of the caſe; ſuch as the *Confectio Fracaſtorii*, or *Elect. e Scordio*, diſſolved in ſmall cinnamon-water, and given *poſt ſingulas ſedes*.

It is common for the redneſs, ſo often mentioned, to appear upon the ſkin, as theſe diſcharges abate: it has happened that this colour has gone off ſometimes, and the patient has been brought into imminent danger,

cated; but their proneneſs to encreaſe the diſcharge by ſtool, or profuſe ſweats, ought to render us very circumſpect in uſing them.

upon

upon giving a mild cathartic: which circumſtances, as they point out a cloſe connection between them, indicate the uſe of a warm regimen, notwithſtanding the heat and other ſymptoms might ſeem to forbid it.

A girl about 9 years old, of a ſlender make, but healthy and active, was ſeized with this diſorder. The ſickneſs and vomiting went off, and the redneſs of the ſkin appeared ſoon after: the apothecary who attended her, judging it an inflammatory caſe, as ſhe complained of her throat, bled her, gave her a cooling purge the next day, and afterwards ſome nitrous draughts. A plentiful efflorescence which covered the face, neck, and arms, ſuddenly diſappeared; a diarrhoea came on, ſhe grew reſtleſs, faint, and inſenſible. In this condition I firſt ſaw her on the third day of the diſeaſe; ſhe frequently ſighed, her pulſe was quick, ſmall, and hard, without any remarkable colour upon her ſkin; and the ſwelling on each ſide the neck large: it was not poſſible to examine the *fauces*, as ſhe lay in a comatous motionleſs condition, her ſtools and

urine coming away inſenſibly. A warm cordial mixture * was frequently given her, upon which the diarrhoea ſoon abated; and the next day the efflorescence again appeared upon her face and arms. From this time ſhe continued to recover, tho' ſlowly, and was for ſome time attended with a cough and hectic heat.

Another ſymptom, which requires our attention in the cure of this diſeaſe, is an exceſſive faintneſs: of this they generally complain ſoon after they are taken ill, and continue to do ſo, if ſenſible, till the diſtemper begins to abate: the urgency of this ſymptom ſeems to indicate the degree of danger: it is more or leſs violent, as the diſeaſe is mild or malignant; and an abatement of it may be looked upon as a pretty ſure preſage of recovery.

Warm aromatic and gently ſtimulating medicines, ſuch as have been already men-

* ℞. Aq. Alexit. ſimp. ℥vj. Alexit. ſpir. cum acet. ℥jſs. Conf. cardiac. ʒ ſs. Pulv. Contray. ſimp. ʒſs. Syr. Croc. ℥ſs. f. mixt. de qua capiat aegra coch. ij. tertia quaque hora.

tioned,

tioned, as the moſt effectual to ſuppreſs the vomiting, and check the looſeneſs attending this diſeaſe, have likewiſe been found uſeful in removing this ſymptom: and though the degree of heat, and quickneſs of the pulſe, would be enough to diſſuade a perſon who has not ſeen the diſeaſe, from giving them in ſo liberal a manner as neceſſity requires; yet we are not to be governed ſo much by theſe ſymptoms, as by the faintneſs, depreſſion of the pulſe, and encreaſe of putreſcency in the *fauces*. One dram of the *Confectio Raleighana* has been given to a youth not quite 15 years of age, every four hours, which was ſoon followed by a ſenſible amendment, and the decreaſe of the patient's reſtleſſneſs, faintneſs, and heat.

Some of the Italian phyſicians forbad the uſe of wine in the cure of this diſeaſe, and the warmth of this climate might perhaps make this caution neceſſary; but as it is a generous cordial, and at the ſame time antiſeptic, it ſeems to be in no reſpect improper here; and, beſides, in whey, I have allowed it to be given, freely, mixed with mint, baum,

baum, or ſage-tea, barley-water, gruel, panada, ſago, and the like; and alone, where the faintneſs has been exceſſive; the age, the former way of life, and the ſymptoms, affording the neceſſary rules as to quantity and kind. Chicken-water, or thin broth, may alſo be allowed, which is frequently very acceptable to the patient. And I don't remember to have obſerved ſo general and early an inclination after animal food, in any acute diſeaſe, as in this: for at a time when one would imagine, both from the condition of the *fauces*, and the degree of heat, that liquids would be the moſt acceptable, it is not uncommon to find children, who have this diſeaſe, extremely deſirous of chicken, and chearfully complying with directions, in hopes of being gratified in this reſpect.

Bliſters are likewiſe of uſe to relieve the faintneſs. At firſt I was in doubt, leſt the flies, by their acrimony, ſhould increaſe the putreſcent diſpoſition, and conſequently aggravate the diſorder they were intended to remove: but no ſuch effect having appeared from

from their uſe, I have ordered them to be applied, and I think with advantage, both to the uſual parts, and to the neck on each ſide from below the ear almoſt to the clavicle, as occaſion required *.

The ulcers in the throat demand our early and conſtant attention, as a conſiderable loſs of ſubſtance cannot here be ſuffered without immediate danger to life itſelf, or the moſt injurious conſequences to the future action of the parts, if the patient ſurvives.

Where the diſeaſe is of the mildeſt kind, a ſuperficial ulceration only is obſervable; which may eaſily eſcape the notice of a perſon unacquainted with it. A thin, pale, white ſlough ſeems to accompany the next degree: a thick, opaque, or aſh-coloured one is a further advance: and if the parts have a livid or black aſpect, the caſe is ſtill worſe. Theſe ſloughs are not formed of any foreign matter ſpread upon the parts affected as a

* It has been obſerved by ſeveral, that the diſcharge from bliſters in this diſeaſe is in general both more copious at firſt, and continues longer than is uſual in other caſes.

cruſt

cruſt or coat, but are real mortifications of the ſubſtance; ſince, whenever they come off, or are ſeparated from the parts they cover, they leave an ulcer of a greater or leſs depth, as the ſloughs were ſuperficial or penetrating.

When the tendency to putrefaction is ſtopped, theſe ſloughs in moſt caſes come off ſpontaneouſly; or their ſeparation may be promoted by ſuitable remedies and applications: but it ſeems by no means adviſeable to attempt it by force, or to ſcrape them off with the fingers or inſtruments, as Severinus propoſes; ſince the experiment has been tried, but with ſuch unhappy conſequences*,

* Si quis tamen vel digitis, vel aliquo inſtrumento levi ipſam (materiam albam) auferre tentâſſet, quamvis operatio haec fieret abſque dolore, ea tamen ablata breviſſimo tempore peribant aegrotantes; quod prae caeteris in Petro Soprano genero meo obſervatum eſt, cui cum hujuſmodi mortificatio apparuiſſet in ſuprema ſuperficie dictarum glandularum faucium, et palati, ita ut videretur eſſe maximo reſpirationi et deglutitioni impedimento, chirurgus exiſtimans poſſe facillimo negotio a ſubjectis partibus eam ſeparari ſolis digitis, leviſſime quidem eam abſtulit; quae ablata, tantum abeſt ut juverit deglutitionem aut reſpirationem, ut utraque potius actio laeſa magis fuerit, unde breviſſimo tempore miſer, meo cum maximo dolore, mortem oppetiit; id quod etiam in aliis quamplurimis pueris ſaepius obſervavi, et praeſertim

as are ſufficient to diſcourage one from perſiſting in this method †.

In a caſe where I was concerned, previous to my being called in, a Surgeon had endeavoured to ſeparate the ſloughs by the aſſiſtance of his probe: he ſucceeded in his attempt without much difficulty; but was ſurpriſed to ſee the ſame parts covered the next day with thick, dark, aſh-coloured ſloughs, penetrating deep into the ſubſtance.

It is true, the ſloughs have been ſometimes ſcarified, from an apprehenſion that matter was lodged underneath them, without any manifeſt inconvenience; but as there are inſtances of fatal mortifications having enſued, it ſeems moſt prudent to decline the practice.

ſertim in ejuſdem Petri filiolo nepoti ex filia, quinque annorum, mihi cariſſima, qui poſt paucos dies eodem modo, quo pater, vitam cum morte mutavit. Corteſ. Miſcel. Med. p. 697.

† Quod ſi enim adhaerentem adhuc cruſtam avellere aggrediamur, ulcerationes magis in profundum procedunt, et inflammationes conſequuntur, augentur dolores, et in ulcera ſerpentia proficiunt. Heredia, p. 109.

From

From under theſe ſloughs, and from every part of the ulcers which they cover, a thin corroſive *ichor* is diſcharged, ſo acrid as to excoriate the external parts upon which it is ſuffered to remain. This is ſometimes obſervable in adults, when the parts above the *fauces* are affected; the *ichor* in theſe caſes flows through the noſtrils, and frequently raiſes pimples and ſmall bliſters on the ſkin of the upper lip; but it is moſt obvious in children, who often have this part, the corners of the mouth, and the cheek on which they commonly lie, bliſtered or excoriated.

It is probable, as hath been already hinted (p. 211.), that part of the ſame virulent matter, paſſing down the *oeſophagus* into the ſtomach and inteſtines, acts upon them as it does upon the ſkin, when applied to it externally; it frets and corrodes the parts it touches, and produces that ſickneſs, vomiting, purging, and faintneſs, which ſometimes accompany this diſeaſe in different parts of its progreſs.

In children, and very young ſubjects, the ſymptoms ariſing from this cauſe are yet more dangerous:

dangerous: the natural ſoftneſs and laxity of the parts liable to be affected, diſpoſes them to ſuffer by it much more than adults: at the ſame time they are commonly alike incapable of promoting the diſcharge of this matter themſelves, and of admitting aſſiſtance from others, being generally, if the diſtemper is not very mild, either comatous and ſtupid, or delirious and untractable. If gargles are injected, they either prevent them from reaching the ſeat of the diſorder, by their tongues, or they ſwallow them, and the putrid taint of the ulcers, together; the miſchief ſpreads beyond the power of art to reſtrain it; violent purgings enſue, or fatal haemorrhages from the penetrating gangrene. And to this, perhaps, it may in part be owing, that children ſuffer ſo much more from this kind of ſore throat, than adults *.

* Heredia takes notice of the ſame thing, and gives it as a principal reaſon why ſo many infants and children ſuffered by this diſeaſe.

Infantum et puerorum multitudo maxima periit, quia nec exſpuere, nec excreare lentas et cruſtaceas materias poſſunt, et minus auxiliis obediunt. p. 100.

That this corroſive matter produces theſe effects is farther confirmed, by obſerving, that thoſe whoſe throats are ſeverely affected, if they have a plentiful diſcharge from the *fauces*, are ſeldom attended with ſickneſs, vomiting, or exceſſive faintneſs; tho' after longer ſleeps than ordinary, or a neglect of encouraging this evacuation, they have complained of ſickneſs, and have had retchings come on: and in ſuch caſes, where there has been little or no diſcharge of this kind, the ſymptoms are commonly the moſt dangerous.

From hence it is obvious, that great advantages may be expected from the conſtant uſe of gently ſtimulating aromatic gargles; as they promote the diſcharge of the pituitous matter flowing to the *fauces*, and doubtleſs, with it, of ſome part of the corroſive fluid above mentioned: to which if we add antiſeptics and detergents, in order to check the progreſs of the mortification, and cleanſe the ſordid ulcers it produces, every indication is provided for.

Where the diſeaſe is mild, the ſymptoms favourable, the ſloughs ſuperficial, or ſcarce perceptible, it may be ſufficient to order a gargle of ſage-tea, with a few roſe-leaves added in the infuſion; three or four ſpoonfuls of vinegar may be mixed with half a pint of the tea, and as much honey put to it as will leave it agreeably acid.

But where the ſymptoms are urgent, the tendency to putrefaction great, the ſloughs large and thick, and the breath offenſive, recourſe muſt be had to more efficacious remedies: a compoſition like the following, varied only as the patient's age and the circumſtances of the diſeaſe required, has in general been attended with very good effects. The proportion here given may be uſed for adults, and the more active parts leſſened for younger ſubjects.

℞ *Decoct. Pectoral.* ℥xij. *cui inter coquendum add. Rad. Contrayerv. contuſ.* ℥ſs. *Liquori colato admiſce Acet. Vin. Alb.* ℥ij. *Tinct. Myr.* ℥j. *Mel. opt.* ʒvj. *f. Gargariſma.*

As the parts about the gullet are frequently ſo much affected, as to render it painful or impracticable for the ſick themſelves to make uſe of the gargle ſo freely as they ought, it is commonly ordered, that a few ſpoonfuls of this liquor, made ſomewhat warm, ſhould be very often injected into the *fauces*, with a ſmall ſyringe; and eſpecially before the patient ſwallows any thing, in order to waſh off as much as poſſible the putrid *ſordes* adhering to the ulcers, and prevent it from paſſing into the ſtomach and bowels *. In young ſubjects this method is the more neceſſary, as they don't always know how to manage a gargle to any purpoſe, did the ſoreneſs of the parts permit them to do it §.

As ſo much depends upon the frequent uſe of gargles, or rather of injections, a ſtrict

* The ſame caution was given by Heredia, and almoſt in the ſame terms.----Cujuſque rei deglutitionem praecedat excrementorum oris excreatio, deterſio, ne lotione venenoſa excrementa cum rebus deglutiendis ferantur ad viſcera. p. 109.

§ ---- cum pueri nequeant gargariſmatis uti, injiciantur cum ſyringa. Idem, ibid.

attention to this affair can ſcarcely be too ſtrongly enjoined to thoſe who have the care of the ſick committed to them; ſince an aſſiduous repetition of theſe lotions not only promotes a diſcharge from the glands of the throat, which is probably of great uſe†, but retards the progreſs of the ulcers, by waſhing off the putrefactive corroding *virus*, and prevents a large train of very dangerous ſymptoms (ſee p. 239, 240.); and has therefore been ſtrenuouſly inſiſted on by ſeveral writers, by Mercatus eſpecially ‡.

If the ſloughs are large, and caſt off ſlowly, they may be touched with *Mel Egyptiacum*, by means of an armed probe; or if the condition of the *fauces* is ſuch, that this cannot conveniently be done, a ſpoonful of the following mixture may be injected, and retained

† Heredia, after having obſerved, that no evacuations by ſtools or ſweat were of uſe in this diſeaſe, admits that ſome advantages may be expected from this diſcharge. Eſt autem aliqua ſpes in frequenti exſpuitione, quando craſſa et glutinoſa excreatur. p. 100.

‡ Cavendum eſt diligenter, ne ſic affecti deglutiant propriam ſalivam, quinimo ora puerorum diligentiſſime ſunt abluenda. Mercat. p. 137.

in the throat, as long as the patient can endure it; the parts may then be washed two or three times with the gargle alone.

℞ *Gargarism. praescript.* ℥ij. *Mel. Ægypt.* ʒj. *m.*

By the constant and regular use of these applications, if the patient is kept warm, and the method of treating him in other respects is observed, agreeable to what has been mentioned above, it seldom happens but that the febrile symptoms disappear, the sloughs come off, and the ulcers are disposed to heal in a few days; unless it be where mismanagement at first, malignity of the infection, or an unfavourable constitution, have one or all contributed to increase the disease, and to render its consequences more lasting and mischievous.

What effects improper treatment produces in this case has already been observed. With regard to the matter of contagion, or the nature of that cause which so suddenly brings on such a train of symptoms as hath been described,

deſcribed, little can be ſaid with any degree of certainty: thus much, however, ſeems to be true in fact, that in ſome caſes this diſeaſe appears to be of ſo mild a nature, and ſo benign, as to require but little aſſiſtance from art: perſons even recover from it under the diſadvantages of unſkilful and injurious management; whilſt in others, the progreſs of the ſymptoms is ſo rapid, and the tendency to corruption ſo ſtrong, that nothing ſeems able to oppoſe it. Juſt as it happens in the ſmall-pox; the benign and diſtinct ſort bears ill treatment without injury; in the malignant flux kind, the utmoſt art and experience are too often inſufficient to conduct the diſtemper to a happy iſſue. Whether this diverſity in the Sore Throat we are ſpeaking of is owing to a difference of conſtitutions, or of ſeaſons, to the different quality or quantity of the contagion, or the manner of receiving it; or whether there are in reality diſtinct ſpecies of it; may perhaps hereafter be more certainly determined.

With reſpect to conſtitution, it may be further obſerved, that, in ſoft, lax, leucophlegmatic habits, and languid, inactive diſpoſitions, every thing elſe being equal, the diſeaſe ſeems to proceed more ſlowly, to go off more irregularly, and to leave behind it more laſting effects. In ſome perſons of the temperament deſcribed, though the fever has grown leſs, and all the ſymptoms abated in four or five days, yet the ſloughs in the throat have continued almoſt a week after; whilſt in the oppoſite conſtitution, though the diſeaſe has been much more acute, yet the ſymptoms have no ſooner abated, than the ſloughs have caſt off, and the ulcers healed of their own accord.

A copious hæmorrhage from the noſe, mouth, or ears, the laſt eſpecially, coming on after the diſeaſe has continued three or four days, or longer, is a dangerous *phænomenon:* for, at this time of the diſtemper, it moſt probably proceeds from the branch of an artery deſtroyed by the mortification, and laid open by the ſeparation of the ſlough, as hath

hath been already obſerved. If the veſſel is therefore large, the bleeding may prove fatal to the patient in a very ſhort time; or if he eſcapes for the preſent, the loſs of a conſiderable quantity of blood at this time of the diſeaſe will occaſion various ill conſequences.

It is therefore abſolutely neceſſary to endeavour to ſtop this diſcharge with all the expedition poſſible. If the patient is coſtive, it will be of uſe to procure relief in this reſpect, by clyſters or ſuppoſitories, as ſoon as can be done: to apply vinegar, by means of tents, or otherwiſe, as near to the orifice of the veſſel as we can: to convey the ſteam of it into the *fauces* and noſtrils plentifully, and to keep the patient in a ſitting poſture, or his head raiſed as high as may be, and his upper parts moderately cool: if theſe methods do not immediately take effect, recourſe muſt be had to more efficacious ones, amongſt which we may rank the *bark* and *opium*.

It is not uncommon for hectic heats, night-ſweats, want of appetite, and dejection of ſpirits, to attend thoſe a conſiderable time, who have had the diſeaſe in a ſevere manner. Freſh air, aſſes milk, and other uſual means of recovering the waſted ſtrength, in a ſhort time reſtore to ſuch invalids their priſtine vigour.

Having thus related the moſt material circumſtances that have occurred to me in reſpect to the ſymptoms, progreſs, and event of this diſtemper, the *juvantia*, *lædentia*, and the accidents chiefly to be regarded in its cure, in ſuch a manner as I hope will enable thoſe who have not ſeen or known it, to diſtinguiſh it from a *common Sore Throat*, and to treat it with ſome degree of propriety and ſucceſs when it occurs, I ſhall conclude with obſerving,

1. That the *Sore Throat attended with Ulcers* ſeems to be accompanied with a ſtrong diſpoſition to putrefaction, which affects the habit in general, but the *fauces*,

ces, and the parts contiguous, in particular. And it ſeems not unreaſonable to ſuppoſe,

2. That the cauſe of this tendency is a putrid *virus*, or *miaſma ſui generis*, introduced into the habit by contagion; principally by means of the breath of the perſon affected.

3. That this *virus*, or contagious matter, produces effects more or leſs pernicious, according to the quantity and nature of the infection, and as the ſubject is diſpoſed to receive or ſuffer by it.

4. That putrefactive and malignant diſeaſes, in common, admit of the moſt ſenſible and ſecure relief, from diſcharges of the peccant matter, either upon the ſkin in general, or on particular parts of the body.

5. That the redneſs, and cutaneous efflorescence, in the preſent caſe, may be conſidered

conſidered as an eruption of the like nature, and therefore to be promoted by ſuch methods as have proved ſucceſsful in ſimilar diſeaſes.

6. That a cordial, alexipharmac, warm regimen has been found by experience to be of the moſt uſe in ſuch caſes; and that bleeding, purging, antiphlogiſtics, liberally employed, either retard or wholly prevent theſe diſcharges.

Therefore, as to expel the morbific matter (3) ſeems to be the deſign of Nature, to promote this deſign by the meaſures that are approved by experience in analogous diſorders, is the duty of the Phyſician.

Of

VIII. *Of the Uſe of the* Cortex Peruvianus, *in Scrofulous Diſorders* *.

AS I do not remember to have met with many inſtances recorded of the effects of the Bark in Scrofulous Diſorders, I take the liberty to offer the following obſervations on this ſubject to the Society, and ſubmit them intirely to their correction and diſpoſal.

About the year 1744, a poor woman brought her child, a boy between twelve and fourteen months old, and requeſted my aſſiſtance for a diſorder in its eyes, that ſeemed to threaten total blindneſs. The eyelids were ſo ſwelled, and ſo exquiſitely tender, that it was with difficulty I obtained the ſlighteſt view of one eye, the coats whereof ſeemed only to be affected: the lips were likewiſe much ſwelled; the glands about

* From the Medical Obſervations and Enquiries, vol. i.

the

the neck enlarged; and the whole aſpect denoted a ſcrofulous tendency.

I ordered a ſpoonful of a decoction of the Bark to be given three times a day, adding to each doſe from ſix to ten drops of the *balſ polychreſt.* or ſo many as might be ſufficient to procure a laxative ſtool every day, the child being naturally of a coſtive habit.

The child was ordered to live upon light broth, and ſuch tender animal food as the poor woman could procure; and to be kept from much fruit and vegetables.

By this method, in about a fortnight, he was able to bear the light; and, in a month, I had the ſatisfaction to ſee him perfectly recovered.

The ſucceſs of this experiment induced me to repeat it as occaſion offered. Not long after, a boy was brought to me, about ſeven years old, of a thin ſpare habit, pale ſickly look, with the eyelids ſo much ſwelled, and the

the eyes ſo tender, as to be incapable of bearing the leaſt glimmering of light; and his face was here and there cruſted with moiſt ſcabs, which had almoſt covered his chin.

I ordered a decoction of the Bark to be given, to the quantity of a ſpoonful and a half, three times a day; and a ſmall pill, with one grain of calomel in a little conſerve of roſes, every other night.

This proceſs was continued about ten days, when he was brought to me again: the eyes were leſs tender, and his face was ſomewhat cleared of the ſcabs: but as the ſeaſon was then growing colder, the decoction was continued alone about a month, when the child had recovered better health than he had enjoyed during the preceding year: he could bear any light without pain, the ſcabs had diſappeared, and the glands were become ſmall and ſofter.

The ſpring following, his eyes again growing tender and painful, and other ſymptoms appearing

appearing of his former indiſpoſition, the ſame remedies were repeated, and produced the ſame effects as before; and that he might be ſecured from the like returns for the future, I adviſed that he ſhould take the decoction and pills for ten days or a fortnight, once in three months, for about a year. This advice was punctually complied with, and he remained free from any ſymptom of the diſorder about four years, from the laſt repetition of the medicines, when he was ſeized with the confluent ſmall-pox, at that time very rife and fatal, and died of the ſecond fever.

In the year 1750, a poor woman brought her child, ſomewhat more than a year old, affected with a very painful ſcrofulous ophthalmy, to Dr. Clephane and me, then at Scarborough. A method like the former was directed, and we had the ſatisfaction to find, ere we left the place, that the child had reaped from it all the benefit we could wiſh.

A young

A young gentleman, about ſeventeen, of a thin habit, in an employment that admitted but of little exerciſe, accuſtomed to a plentiful table, and deriving from his parents a ſcrofulous taint, deſired my aſſiſtance for a large indurated parotid.

I directed a two-ounce draught of the decoction of the bark, with about forty drops of the *tinct. guaiac. volatilis* to be taken twice a day, and to be continued during two months.

By the uſe of this remedy he grew ſtrong and more florid: the tumour did not increaſe, but felt ſomewhat ſofter than at firſt. Having thus ſtopped its progreſs; I adviſed him to deſiſt about two months, and then to repeat the ſame remedy: but no conſiderable benefit accrued from this ſecond courſe; the tumour, though leſs than at firſt, was ſtill obſervable.

Things remained in this ſituation about a year, when his chin and upper lip began to be covered with a thick yellow ſcab, moiſt

and itching. This was both troubleſome and diſagreeable. I had recourſe again to the Bark in various forms, but without the advantage I hoped for: it ſeemed to ſtop the progreſs of the diſtemper, but did not cure it. A courſe of *calomel* and *ſulphur aurat. antimon.* in ſmall doſes, *viz.* a grain of each every night, gradually cleared his face of this diſagreeable gueſt; but it ſoon broke out again. Bathing in the ſea, and the uſe of Scarborough water upon the ſpot, at length extirpated this cutaneous diſorder. The parotid however ſtill continued ſwelled; but as he now began to acquire a more manly habit, it ceaſed to be conſpicuous.

In this caſe I had juſt reaſon to apprehend that the Bark put a ſtop to the tumour's increaſe, and rather ſoftened it; but this was all: and I have met with many other caſes, in which the Bark has had the like effects; checked the ſpeedy progreſs of the diſeaſe, reſtored a better ſtate of health in various reſpects, and laid a proper foundation to proceed upon, in attempting a cure by other methods.

methods. I have likewiſe made uſe of the Bark in ſcrofulous ulcers, but hitherto not with the ſucceſs one might expect.

I have at preſent under my care a boy about fourteen, a girl about ten years of age, and a third about ſeven of a very delicate habit. The two firſt are poor, and a charge to their parents, from a ſoreneſs in their eyes, that renders them incapable of bearing the light, or doing any thing towards their ſupport. The laſt is obliged to live in conſtant darkneſs, though the child of perſons in better condition. They have been in the courſe deſcribed above ſeveral weeks, and are daily recovering.

Sometimes I give the *calomel* pills above mentioned with the decoction, eſpecially if any ſymptoms of the worms appear, or if the caſe is attended with coſtiveneſs, and a diſcharge of acrimonious moiſture on any part of the ſkin. But the Bark is the remedy I think chiefly to be depended on; and the doſe ſhould be as much as the patient

can be prevailed upon to take; providing with equal care againſt coſtiveneſs and its oppoſite.

As I imagine the reſult of repeated obſervations will be more agreeable to your plan than a detail of particular caſes, I ſhall conclude this narrative with remarking, that I have given the Bark, in caſes ſimilar to thoſe above deſcribed, to children of different ages, to adults of both ſexes, and in various conditions of life; and have found, that it may not only be given with great ſafety, but to manifeſt advantage, in many ſcrofulous complaints: inveterate ophthalmies generally yield to it: incipient glandular tumours are very frequently reſolved, and their farther progreſs ſtopped: ſwelled lips, cutaneous blotches ariſing from the like cauſe, are healed, and the tendency to a ſtrumous habit corrected, by a proper uſe of the *Cortex Peruvianus*.

There are few, I believe, who are converſant in the practice of phyſic, who do not find

find occaſion, at one time or other, to be diſſatisfied with the ſeveral methods and medicines hitherto recommended in the cure of the diſorders I have been mentioning. A ſwelled lip, a blood-ſhot eye, will frequently baffle a courſe of efficacious remedies under prudent directions. When the diſeaſe is farther advanced, it grows more obſtinate; the greater the number of parts that are affected, the more the difficulties are increaſed. We have indeed a copious choice of alteratives handed down to us, all which, perhaps, have been, in particular inſtances, beneficial; but nevertheleſs they too often diſappoint us. Moſt of the remedies propoſed for this diſtemper, are ſuch as ſeem recommended more with a view to alter the juices, than immediately to affect the ſolids: but we hitherto know much leſs of the nature of fluids circulating in an animal body, or how to alter them, than we do how to apply ſuch medicines as affect the ſolids, and, in conſequence thereof, produce certain alterations in the fluids.

It is not ſafe to infer, that the various kinds of ſalts have the ſame effects upon animal juices, whether taken from the animal, or circulating in their proper canals. Experience does not always warrant ſuch concluſions. The digeſtive powers of the ſtomach, by the ſame means that they convert different ſorts of aliments, ſome of them ſufficiently acrid, into a mild and milky fluid, ſeem able to deprive the moſt pungent ſalts of great part of their activity. And this circumſtance alone, in my opinion, renders a dependance upon one part of the *Materia Medica*, on which many pleaſing expectations have been formed, much to be ſuſpected; I mean the different kinds of ſalts recommended in ſtrumous diſorders. It is very certain that the effects of the acid and the alkaline greatly depend on the preſent diſpoſition of the juices in the ſtomach and firſt paſſages. The neutral ones are not altogether exempt from the ſame influence; and ſhould they paſs unaltered into the blood, we cannot aſcertain their effects upon it: and could we even do this, can it reaſonably be ſuppoſed, that a few drams of

any kind of ſalt, however active, and properly adapted, mixed with ſo many pounds of blood, and other animal juices, could produce the effect we wiſh for, or be able to extirpate a diſeaſe, as the ancients expreſſed themſelves, *totius ſubſtantiae*, and fixed in the moſt inacceſſible parts of the animal oeconomy? The chance therefore of curing this diſtemper, by means of remedies deſigned to act on the fluids alone, is but little. It may indeed be urged, that ſalts, as ſtimulants, affect the ſolids as well as fluids; and that they may do ſo is granted: but in this caſe their operation is much confined; for it may be doubted, whether their *ſtimulus* extends beyond the firſt paſſages.

The aſpect, habit, and age of ſtrumous perſons; the nature of their tumours in reſpect to their formation, progreſs, and iſſue, ſeem to indicate a general laxity of the ſolids, as well as great viſcidity of the fluids, eſpecially thoſe contained in ſome particular ſeries of veſſels; which cauſes, when combined, proceed with a ſlow but conſtant efficacy to produce the worſt of miſchiefs, un-

leſs prevented by the interpoſition of ſome favourable change in the non-naturals, or by medical aſſiſtance.

It may indeed be diſputed, whether the ſolids being firſt relaxed, the fluids do not become viſcid, and unfit for their office, in conſequence of this relaxation; or whether the juices are not firſt vitiated, and from them a laxity of the ſolids is inevitably derived. Caſes may happen in which one or the other of theſe ſuppoſitions may, with great probability, be admitted; but in either caſe, ſince it ſeems beyond diſpute, that the power of affecting the ſolids is more under our command than that of altering the fluids, it is reaſonable to direct our applications in the cure of this diſtemper more immediately to the ſolids, as, without their aſſiſtance, the fluids muſt ſtill remain in a morbid condition.

All internal remedies given by the mouth, and deſigned to act beyond the ſtomach, muſt be expoſed to the efficacy of the powers by which digeſtion is performed: it is therefore

fore incumbent upon the preſcriber to conſider how far the virtues of the medicines he gives, are liable to be affected in their tranſit to the parts where he is deſirous they ſhould act. Moſt of the ſaline remedies, as hath already been obſerved, are liable to great alterations in the ſtomach. Alcaline and acid ſalts may become neutral and ſaponaceous; neutral ones may be diluted, and diſpoſed to run off immediately by the emunctories, and all of them contribute as little towards eradicating this diſtemper, as they do towards effecting the change we call digeſtion; a change whereby ſubſtances very remote from it are converted into an animal nature.

And it ſeems to me, that in the cure of all chronic complaints, however diſtant their ſeat may be from the ſtomach, thoſe will have the greateſt ſucceſs, who attentively conſider the preſent ſtate of this organ; who remove every obſtruction to its performing the office of digeſtion with eaſe, conſtancy, and expedition. For if digeſtion is well performed, the chyle is proper; the blood

blood produced from this chyle is natural; the ſecretions, nutriment, and excretions, will be regular; health, ſtrength, and activity, enſue; diſeaſes vaniſh. If digeſtion languiſh, the contrary happens, in ſpite of the beſt ſpecifics, unleſs one part of their virtues be to reſtore the injured faculties of digeſtion to their priſtine and natural ſtate.

And from the moſt attentive conſideration of the cure of many chronic complaints, and the moſt unprejudiced diſquiſition what ſhare the medicines applied have had in effecting ſuch cures; by much the greateſt part of theſe diſtempers ſeem to have been removed, rather in conſequence of the medicines given having had a certain effect on the ſtomach, and thereby enabling nature to do her own buſineſs, than by any ſpecific operations on the particular ſeat of the diſtemper.

If the immediate cauſe of intermittents does not reſide always in the ſtomach and firſt paſſages, it often does undoubtedly. An emetic ſometimes cures it, bitters of all kinds

kinds often; aſtringents likewiſe: and, in a word, whatever has a power of aſſiſting digeſtion, has, at one time or other, been recommended in the cure of agues. The Bark enjoys a degree of bitterneſs and aſtringency, that few others are poſſeſſed of in the ſame proportion. Some drugs are more bitter, but with leſs aſtringency; others are more aſtringent, but leſs bitter. There are many caſes that yield to aſtringents, upon which bitters have no effect. There are others, that chamomile flowers, wormwood, gentian, and the like, will often cure, in which aſtringents are of no uſe. But all theſe give way to the Bark, if the obſtacles to its efficacy are once removed.

Strumous diſeaſes are known to affect the glandular parts of the body particularly: they have been judged to proceed from obſtructions of theſe parts; and it has likewiſe been the opinion of ſome, that, in all glandular obſtructions, the Bark was an improper and injurious remedy.

It is well known how great prepoſſeſſions were raiſed againſt the Bark, ſoon after its diſcovery;

covery; ſo that thoſe who were its greateſt advocates, and, from experience, had the weightieſt reaſons to be ſo, could not altogether diveſt themſelves of many apprehenſions concerning it.

Sydenham imagines it capable of producing rheumatiſms. It has been found, ſince his time, to be an effectual remedy in this diſeaſe, under certain circumſtances. Thoſe who are ſubject to intermittents, are frequently liable to rheumatiſms. Sydenham did not obſerve, that a tranſition from one to the other, was eaſy and natural. The ſtate of the blood, in both caſes, is nearly the ſame; the colour of the urine, regular exacerbations of pain, going off in profuſe ſweats, and many other particulars, are ſimilar in both. Had more of the Bark been given, no ſuch rheumatiſm had enſued: had the Bark been given before the rheumatiſm was fully formed, the Bark would have prevented it: had it been given when the pains remitted, ſo as to form a manifeſt apyrexy, the rheumatiſm would moſt probably have been cured.

The vulgar, at that time, took the advantage of ſuch circumſtances to ſtrengthen their prejudices againſt this remedy. Nothing was more common at that time, and nothing more firmly believed by many now, than that the Bark produces "pains in the bones," that is, rheumatic pains, which however were not owing to its uſe, but exiſted, becauſe ſufficient quantities of it had not been given.

Sydenham was not the only eminent perſon of the faculty who entertained ſuch unjuſt prejudices againſt this remedy: the great Boerhaave, who did much in the theory of phyſic, in reſpect to ſeparating truth from falſehood; certainty from hypotheſis; yet in practice ſubmitted to the faſhion of his country in too many inſtances. An unconquerable dread of the Bark was one of theſe: he ſaw many chronic complaints, wherein the Bark had been given, and attributed them, too readily, and from opinion, rather than experience, to the uſe of this drug; though probably thoſe complaints aroſe from its not having been given

in

in ſufficient quantities. This induced him to forbid the Bark to many Britiſh ſtudents at Leyden affected with agues, till thoſe very evils had befallen them, which he apprehended from the Bark; and ſome of them, to my knowledge, fell a ſacrifice to this unhappy prejudice, which ſeems in part to have proceeded from the following circumſtance.

The Bark commonly ſold in Holland, is not ſo good as that which we keep in the ſhops in England; for whatever is unſaleable here, will find a market in Holland; part of which no doubt is conſumed there; and from hence might ariſe many inconveniencies ſufficient to diſcourage the profeſſor. If a certain quantity of good Bark is neceſſary to take off an intermittent, and a much ſmaller quantity is given, and the kind greatly defective in point of efficacy, it is very certain, that little benefit can be derived from it. The violence of the paroxyſms may perhaps thereby be moderated, and the aſpect of the diſtemper changed, though the diſeaſe itſelf may ſtill remain, and be followed by

by a train of obſtinate complaints, not proceeding from the uſe of the Bark, but merely from its not being good, and not being given in ſufficient quantities.

The firſt attempts I made in the cure of ſome ſcrofulous complaints, by the Bark, afforded me ſufficient encouragement to proceed: and I have now the ſatisfaction to know many young people, of both ſexes, free from any appearance of this diſeaſe, who, in their infancy, had been infeſted with very painful ophthalmies, ſwelled lips, and the like complaints, in ſpite of many efficacious remedies which had been applied.

It will not however ſucceed in all caſes; but there are few in which a trial can be attended with much detriment. I have never known it avail much, where the bones are affected, nor where the ſcrofulous tumour is ſo ſituated, as to be attended with much pain, as in the joints, or under the membraneous covers of the muſcles; for when it attacks theſe parts, the *perioſteum* ſeldom eſcapes

eſcapes without ſome injury, in which caſe the bone will of courſe be likewiſe injured.

Here the Bark is of no effect: inſtead of leſſening, it rather adds to the fever that accompanies theſe circumſtances; and, if it does not increaſe the force of the miſchief, it ſeems at leaſt to haſten its progreſs.

I commonly make uſe of a decoction like the following, as a form in which a ſufficient quantity may be given, with the leaſt diſguſt.

℞. *Pulv. Cort. Per.* ℥i. *coque in aq. purae* lb. ii. *ad* lb. i. *ſub finem addendo rad. glycyrrh. inciſ.* ℥ſs. *Colaturae adde aq. nuc. M.* ℥ii. *M. capiat coch.* ii, iii, *vel* iv. *cum tinct. guaiac. vol. gut.* x, xx, *ad* lx *uſque, bis terve quotidie.*

The powder ſoon becomes extremely diſagreeable to very young patients: and the extract, I think, is not ſo much to be depended upon, as may have been imagined. In making the extract, it is expoſed to ſo much heat, as muſt have ſome effect upon its

its virtues, and perhaps not to their advantage: and in adminiſtering it, if great care is not taken to mix it intimately with a proper vehicle, or ſome very ſoluble ſubſtance, in weak bowels it often purges, and not only diſappoints the preſcriber, but injures the patient. A ſmall quantity of the *Cortex Winteranus* added, gives the medicine a grateful warmth, and renders a quantity of compound water leſs neceſſary. And a little liquorice, a few raiſins, gum arabic, or the like, added to the decoction before it is taken from the fire, by making the liquor viſcid, enables it to ſuſpend more of the fine particles of the Bark, and thereby improves the efficacy of the medicine, and, at the ſame time, renders it leſs diſagreeable.

IX. *A Letter to the* MEDICAL SOCIETY, *concerning an* Aſtringent Gum *brought from* Africa *.

IN hopes that ſome of your correſpondents may have it in their power to procure us a drug, which, from a few tryals already made of it, promiſes great advantage to the public; I take the liberty to ſend the following deſcription and account of it.

It is a hard brittle gum, of a deep red or almoſt black colour, and opaque; except the very minute fragments of it, which appear like bits of garnet, red and tranſparent.

It has no ſmell; but, applied to the tongue, it ſoon diſcovers a ſtrong, but grateful aſtringency; and great part of it diſſolves readily in the mouth, with ſomewhat of a mucilaginous ſweetneſs, joined with its ſtypticity. When it is coarſely powdered, and thrown into water, about five or ſix parts in ſeven, as near as I can gueſs, ſoon diſ-

* From Medical Obſervations and Inquiries, vol. i.

ſolve,

ſolve, and communicate a deep red colour, and a ſtrong aſtringent taſte to the water: moſt of what remains undiſſolved appears to be reſinous. This gum differs from the red lumps of the common gum Senegal, in being much more brittle; and from the *ſanguis draconis* of the ſhops, in diſſolving in water; and from both, in having ſo remarkable a ſtypticity when taſted.

Its external appearance, indeed, is ſo much like that of the genuine or unmanufactured *dragon's blood*, that a good judge may eaſily be deceived thereby; but its aſtringent taſte and ſolubility in water manifeſt an eſſential difference.

I have had ſpecimens ſent me of an opaque reddiſh gum, but ſeemingly the produce of a very different tree, as it does not diſſolve ſo readily in water as the former, and its taſte is bitter and auſtere.

The firſt time I had any intimation of the gum I have been deſcribing, was in a conſultation with the late Dr. Oldfield, on ac-

count of an obſtinate chronical *diarrhoea*, in which ſeveral efficacious medicines had been uſed in vain. On this occaſion the Doctor one day mentioned the good effects he had met with in ſome ſuch caſes from a gum which he called the *true gum Senegal*, and deſcribed it to be of a deep red colour, a ſweetiſh aſtringent taſte, and brittle.

As I was at that time intent upon collecting and examining whatever had relation to the *Materia Medica*, I enquired for ſuch a gum amongſt the moſt conſiderable dealers and importers, but met with nothing that anſwered the Doctor's deſcription.

A few years after this, in my return from Scarborough, I called upon an eminent druggiſt at York, who, amongſt other curious parcels of drugs, ſhewed me the gum above deſcribed, for ſome of the fineſt dragon's blood, or *ſanguis draconis off.* he had ever ſeen.

Upon taſting it, I ſoon diſcovered it was very different from any kind of dragon's blood

blood yet known, and indeed that it ought not to be ranged under that name, as it was, for the moſt part, aqueous, manifeſtly aſtringent, and mucilaginous; from which circumſtances, and its external appearance, I judged it was the gum that Dr. Oldfield had deſcribed to me under the title of the *true gum Senegal*; though I think there is good reaſon to object to this appellation, as the little we have yet received comes principally from the river Gambia, and the common gum Senegal has been in poſſeſſion of that name, ſo far as appears to me, from its firſt diſcovery *.

The Gentleman who ſhewed me this drug, informed me, he had purchaſed it on board a Guinea ſhip *at Hull:* the whole parcel but amounted to a few pounds; all which he bought, and ſold to the moſt curious of his cuſtomers, as a rare ſort of the true dragon's blood.

* If a name was to be given to the drug in queſtion, it may not be improper to call it, *Gummi Rubrum aſtringens Gambienſe.*

This information induced me to look into the books of ſome of the later African travellers, in one of which, viz. *Moor's Travels into the Inland Parts of Africa*, we have the following accounts of it. In a letter of inſtructions from the Governor of James's fort, in the mouth of the river Gambia, to our author at Brucoe, a factory up this river, dated May 27, 1733, is the following paragraph, p. 113, edit. 2d.

"There is a red liquor that bleeds plentifully from the bark of a tree called * *pau de ſangue*, upon the inciſion, and in little time hardens to the conſiſtence of gum, which is of great value: and therefore you are deſired to uſe your utmoſt to procure large quantities of it."

In reply to this, our author writes, the next month, to the Governor as follows.

"I have ſent a piece of gum, which I believe was taken from the *pau de ſangue*;

* The word *pau* ſeems to be a corruption of the Portugueſe *palo*, ſignifying wood.

" I deſire you will pleaſe to examine it, and " let me know if it is the right ſort; be- " cauſe, if it is, I will do my utmoſt to " procure large quantities of it." And gives this further account of it at p. 148. " I " had always the utmoſt regard to all " their (the Directors) orders, and there- " fore applied myſelf to inquire after any " new kind of goods that could be had, par- " ticularly gum. The ſame having been " repeated to me by Mr. Hull (Governor of " James fort) I ſent him a ſample from " Brucoe, as I mentioned before, which " proved gum dragon. I ſtrove to get " more of that kind, but, it being a new " thing, the natives could not be prevailed " upon to follow it, ſo as to bring in any " quantities; for they would bring me in " all kinds of gum, ten or twelve pounds " at a time, which I picked, and did not " find, perhaps, above two pounds of " gum dragon in that quantity: the reſt " was like gum Senegal, but not ſo good.

" Gum dragon comes out of a tree (adds " our author) called *pau de ſangue*, which

" has a very rough bark; upon wounding " of it, it ſweats out in drops like blood; " which joining together, and being dryed " by the ſun, congeal into lumps. I have " had ſome as large as pullets eggs."

Perhaps it may be mentioned by other writers; but this account I think ſufficient to direct any perſon, into whoſe hands your collection may come, and who may have occaſion to traffic in that part of the world, to make proper inquiries after it.

You will obſerve, from the inſtructions given to our author, that at leaſt ſome expectations had been formed of its uſefulneſs; and indeed, from the tryals that have been made, from its ſenſible qualities, and Dr. Oldfield's experience, I cannot but think it an article worth inquiring after, as it may in time become a valuable addition to the *Materia Medica*, as well as of ſome little benefit in commerce, and perhaps in colouring likewiſe.

The

The diſtempers in which this drug ſeems to promiſe ſome advantage, are, in particular, habitual *diarrhœas*, *fluor albus*, immoderate menſtrual diſcharges; and, in general, all ſuch diſeaſes as proceed from laxity and acrimony.

X. *Expe-*

X. *Experiments on mixing Oils, reſinous and pinguious Subſtances with Water, by means of a vegetable Mucilage: In a Letter from Mr.* James Bogle French, *Apothecary in* London, *to Dr.* John Fothergill. *With Remarks by the ſame* *.

Wood-ſtreet, January 18, 1757.

SIR,

I MADE the experiments you deſired, and I own with a ſucceſs that exceeded my expectations. I may venture to aſſure you, they have been performed with ſo much accuracy, that, I believe, you may ſafely rely on any inferences to be made from them.

I am, with great eſteem,

Sir,

your moſt obliged,

humble ſervant,

JAMES BOGLE FRENCH.

* From the Medical Obſervations and Inquiries, Vol. i.

Experi-

Experiments on mixing Oil and Water by means of a Mucilage.

THE mucilage I firſt made tryal of was the following:

I diſſolved four ounces of clean gum Arabic in eight ounces of New River water, which formed a mucilage of the conſiſtence of a thick ſyrup.

EXPERIMENT I.

To two drachms of this mucilage, I put half an ounce of olive oil, one ounce of water. By agitation, the mixture aſſumed the appearance of an emulſion, and continued ſo, after ſtanding about three or four minutes, when the oil and water began to ſeparate.

EXPERIMENT II.

I put the ſame quantity of oil and water to half an ounce of the mucilage. This mixture likewiſe, by agitation, ſoon became like

like an emulſion, and remained ſo as long as the former.

EXPERIMENT III.

I tried the ſame experiments with a like quantity of oil of almonds. A perfect uniform emulſion was produced; but, on ſtanding three or four minutes, a ſeparation enſued.

EXPERIMENT IV.

Two drachms of oil of almonds, half an ounce of the mucilage, and two ounces of water, were put together; theſe, by ſhaking, ſoon had the appearance of an uniform emulſion; though, on ſtanding, they ſeparated as in the former experiments.

EXPERIMENT V.

I put half a drachm of the powder of gum Arabic to the ſame ingredients as in Experiment I. and found, that, by means of a ſomewhat longer agitation, the like union was obtained; and this was alſo more laſting. Of the ſeveral oils made uſe of in the experi-

experiment, I think the oil of almonds unites the moſt ſpeedily, and remains united in the form of an emulſion, much longer than any of the others.

EXPERIMENT VI.

To one drachm of ſymple ſyrup, and one drachm of the mucilage, I put half an ounce of olive oil, two drachms of proof ſpirit, and one ounce of water. Theſe, by a ſhort agitation, produced a very uniform emulſion, and retained this appearance ſeveral minutes.

EXPERIMENT VII.

The ſame ingredients without the ſyrup, in the ſame proportions, ſhook together an equal time, did not afford ſo equable a mixture, and a ſeparation ſooner enſued.

EXPERIMENT VIII.

To one drachm of oil of almonds, I put two drachms of honey, and one ounce of water. Theſe, by agitation, were ſeemingly united; but ſoon parted upon ſtanding.

EXPERI-

EXPERIMENT IX.

Inſtead of the mucilage, I made tryal of ſome of the more viſcid ſyrups, but none of them ſucceeded ſo well as the mucilage: the ſyrup of marſhmallows anſwered the beſt; though this but indifferently, and not without labour.

EXPERIMENT X.

One ſcruple of the powder of gum Arabic, with one drachm of *balſam. Peru. capivi*, and *balſam. guaiacin.* two drachms of proof ſpirit, and one ounce of water, unite eaſily by agitation. The balſam *guaiacin.* by this means affords a mixture of a fine blue colour, laſtingly uniform; with the *balſam. Peru.* it did not long continue mixed, tho', on ſhaking, it reaſſumed a good appearance.

EXPERIMENT XI.

To one drachm of *balſam. capivi*, was put one drachm of the mucilage of gum Arabic, and one ounce of water. Theſe, by agitation, preſently formed a neat ſmooth draught, tho' the parts ſeparated a little upon ſtanding.

Experi-

Experiments on mixing Oils, &c. by Attrition.

EXPERIMENT XII.

To one drachm of the mucilage of gum Arabic, I put two drachms of olive oil, and one ounce of water. Theſe, by moderate attrition in a mortar, formed a neat emulſion, and continued perfectly mixed many days.

EXPERIMENT XIII.

Oil of almonds and linſeed, in the ſame proportions, treated as in the former experiment, made as perfect an emulſion, and kept united in the ſame manner.

EXPERIMENT XIV.

I varied the proportions of mucilage and oil, but found the mucilage would not keep more than double its quantity of oil, united with water, any conſiderable time.

EXPERIMENT XV.

A drachm of mucilage, and a drachm of *balſam. capivi*, being firſt well rubbed together,

gether, and an ounce of water added, formed an homogeneous milky liquor, which remained intimately mixed many days.

EXPERIMENT XVI.

The ſame quantity of yolk of egg, mixed the balſam and water as ſpeedily, and the mixture remained united as long as the former; but the taſte of this was more unpleaſant.

EXPERIMENT XVII.

A ſcruple of the mucilage mixed half a drachm of *balſ. Peru.* with an ounce of water, as perfectly and expeditiouſly as a like quantity of the *vitel. ovi*, and covered the taſte of the balſam much better, though it parted ſooner from the mucilage than the *vitel. ovi*, when thus mixed in equal quantities.

EXPERIMENT XVIII.

Balſam of Gilead, the thinner Straſburgh turpentine, the fine liquid reſin of late years brought from Newfoundland and Nova Scotia, commonly called *balſamum Annapolitanum*,

num, treated in the ſame manner, united with water as readily, by the means of the mucilage, as when the *vitel. ovi* is uſed, and the taſte at the ſame time was better.

EXPERIMENT XIX.

To half a drachm of mucilage of gum Arabic, I put one drachm of *balſam. guaiac.* one drachm of proof ſpirit, and one ounce and a half of water, which, by attrition, made a very ſmooth draught, and did not ſeparate; that by agitation (EXP. X.) was of a deeper blue colour; perhaps this was owing to the parts not being ſo perfectly divided; but both ſucceeded well.

EXPERIMENT XX.

I took one ſcruple of *gum guaiac.* in powder, one ſcruple of mucilage, and one ounce and a half of water, which I rubbed carefully in a marble mortar; I did the ſame with the *vitel. ovi*; and, on ſtanding ſome days, it appeared, that the gum was beſt ſuſpended by the mucilage.

EXPERIMENT XXI.

Gum benzoin diſſolved almoſt entirely by this management, and continued perfectly mixed with the water a conſiderable time.

EXPERIMENT XXII.

One ſcruple of *balſam. Tolu*, one ſcruple of the mucilage, with the ſame proportion of the other ingredients as in the former experiment, ſucceeded rather better, and made a neat draught full of the flavour of the balſam.

EXPERIMENT XXIII.

Myrrh half a drachm, mucilage of *gum Arabic* one drachm, firſt rubbed together, and then mixed with one ounce and half of water, formed a ſmooth uniform mixture, which continued equally united ſeveral days, when a ſmall part ſubſided, but, upon ſhaking the mixture, ſoon reſumed its former appearance.

EXPERIMENT XXIV.

The ſame quantity of myrrh, readily diſſolved, by attrition, in the ſame quantity of water,

water, without the mucilage, but the different parts ſoon ſeparated.

EXPERIMENT XXV.

Half a drachm of the common ſtyrax, treated as the myrrh, (EXP. XXIV.) ſo far diſſolved, as to communicate a ſtrong but fine flavour to the water.

EXPERIMENT XXVI.

I took five grains of camphire, with a ſcruple of mucilage of *gum Arabic*, and an ounce and half of water, and it formed a very agreeable draught, which, on ſtanding ſome nights, ſeparated but very little.

EXPERIMENT XXVII.

I melted bees-wax in ſpirits of wine upon the fire, and filtered off the ſpirit: half a drachm of the wax ſo treated, rubbed with a drachm of mucilage, mixed with an ounce and a half of water, ſo as to appear like an uniform emulſion; but this requires ſome labour: the wax ſoon ſwims at top, but eaſily mixes again by agitation.

EXPERIMENT XXVIII.

A ſcruple of *ſperma ceti*, rubbed with an equal quantity of mucilage, makes an elegant draught: but more labour is here required than in the common ſolution with yolk of egg; the mixture continues, however, much longer homogeneous, the *ſperma ceti* appearing only like a cloud on the top of the phial ſome days after; but, on agitation, becomes perfectly ſmooth, and its taſte as little rancid as when the mixture was freſh made.

EXPERIMENT XXIX.

Four grains of muſk, one ſcruple of the mucilage of *gum Arabic*, one ounce and half of water, of ſpirituous water and ſimple ſyrup, of each a drachm, with very little labour, form an agreeable draught; which appeared uniform, and continued ſo for ſome time, when the muſk ſubſided a little, but, by a ſlight agitation, ſoon reſumed its firſt uniform appearance.

EXPE-

EXPERIMENT XXX.

I took one ſcruple of *balſam. ſulph.* with a ſcruple of mucilage and one ounce and half of water; and this alſo mixed agreeably, and ſeparated but little on ſtanding ſome time: the taſte was likewiſe leſs offenſive than might have been expected.

EXPERIMENT XXXI.

With ten drops of oil of cloves, one ounce of water, and a ſcruple of mucilage of *gum Arabic*, a perfect union may eaſily be produced, and the mixture continues uniform many days.

EXPERIMENT XXXII.

I tryed the ſame experiment with five drops of oil of cloves, anniſeeds and nutmegs, by means of the mucilage of *gum Arabic*, and an ounce and half of water, which readily united.

EXPERIMENT XXXIII.

A mucilage was prepared of clean *gum tragacanth*, diſſolved in the ſame water, and of

a ſimilar conſiſtence with that made from *gum Arabic:* with this mucilage I repeated the preceding experiments by agitation, but could not unite oil and water by this medium ſo ſpeedily or laſtingly as by the mucilage of *gum Arabic*, though I made uſe of double the quantity of mucilage to that of oil in ſome of the experiments.

EXPERIMENT XXXIV.

The mucilage of *gum tragacanth* was alſo tryed with the balſams, by attrition, but a larger quantity was required, and the union was neither ſo perfect nor ſo laſting; though by ſimple agitation, double the quantity of mucilage mixed the balſam and water ſo well as to have the appearance of an uniform emulſion; but the parts ſoon ſeparated.

EXPERIMENT XXXV.

Many of theſe experiments, by attrition, I repeated with mucilage of quince ſeeds, made of the like conſiſtence with the others I had uſed, and found the mixture ſucceeded very well, and in moſt of them better than with the mucilage of *gum tragac.*

EXPE-

EXPERIMENT XXXVI.

I likewiſe made tryal of ſtarch, reduced to a jelly by boiling it with water, and found that this alſo united many of the liquid reſins; though on ſtanding they ſeparated: ſeveral ſyrups were likewiſe made uſe of for the like experiments, but ſcarcely any of theſe ſucceeded: ſyrup of marſh-mallows anſwers the beſt; but even this is inferior to a much ſmaller quantity of the mucilage of *gum Arabic* of the ſame conſiſtence.

EXPERIMENT XXXVII.

I tryed to cover the acid of vitriol by theſe mucilages, and found that of *gum Arabic* anſwered beſt; the quince ſeeds better than the *tragacanth*, and that better than the *ſyrup altheæ*: theſe I did by agitation.

Remarks on the preceding Experiments.

By J. FOTHERGILL, M.D.

IT may not be improper to acquaint the Society with what view the preceding experiments have been made, and what purpoſes they are intended to ſerve: I ſhall do this with as much conciſeneſs as I can, and ſhall point out ſome of the advantages which I think may reſult from them.

In 1748, I received a MS. from a correſpondent at Dublin, entitled, *A new method for the improvement of the manufactures of drugs*, in a treatiſe on the *elixir proprietatis*, which was printed here the ſame year under this title: at that time I aſcribed it to Dr. Rutty, from whom I received it, though it was ſent to me as the work of an anonymous acquaintance: but I have ſince been informed, the public is indebted for it to H. Barton, an ingenious apothecary in Dublin.

Though theſe circumſtances may ſeem foreign to the ſubject, yet as I think the treatiſe

tiſe above mentioned contains much uſeful inſtruction, and as I am obliged to it for the hint which gave riſe to the preceding experiments, and for the advantages received from them, I think it is but juſtice to give the public this information.

Our author tells us (in page 20) that he diſſolved gum Arabic in water to the conſiſtence of a thick mucilage, with this made an union of turpentine with water, in the form of a neat, ſmooth emulſion: he likewiſe acquaints us, that the ſame mucilage, with ſome oil of almonds and common water, were mixed together in the form of an emulſion.

At this time I was engaged in ſome enquiries into the origin of amber, and as I had many reaſons to believe that it was a vegetable reſin, reduced by time and a vitriolic acid into the condition we now ſee it, I imagined it not impracticable to produce a ſubſtance reſembling amber in many of its properties.

To

To mix a ſtrong vitriolic acid intimately with any of the vegetable reſins, was a difficulty I could not ſurmount 'till I met with the treatiſe above mentioned; for the oil of vitriol burns that part of the reſin which it touches, the moment they come in contact; and if the oil is lowered with water, it will not mix by any other means I am acquainted with, ſo intimately, and without burning the reſin, as by the aſſiſtance of a mucilage; and I had the pleaſure of obſerving, from the firſt eſſay I made, that the mixture inſtantly gave the fragrance of amber ſufficiently ſtrong and diſtinct.

Other affairs took me off from proſecuting this inquiry any farther at that time; but I have ſtill made uſe of the ſame contrivance to exhibit ſeveral medicines in a liquid form, which, with reſpect to extemporaneous preſcription, are ſome of the moſt untractable in the *Materia Medica*.

Expreſſed and eſſential oils, balſams, reſins, gummi-reſins, reſinous tinctures, pin-

guious animal ſubſtances, by the means of a vegetable mucilage, are rendered to a certain degree miſcible with water, and capable of being adminiſtered, in this form, as ſpeedily and effectually, as by means of the *vitellum ovi*, the common medium now in uſe.

The mucilage has beſides this further advantage; it is ſeldom foreign to the preſcriber's intention; when he gives theſe ſubſtances, it is not known to diſagree with the ſtomach in any caſe; which cannot be ſaid of the *vitel. ovi*; it is not liable to become rancid and exceſſively prejudicial; and, what will be of weight with ſome compounders, it is much leſs expenſive.

When I was ſatisfied, from my own experiments, that this method was in moſt caſes preferable to any other commonly practiſed; and thought it might be of uſe to others; I prevailed upon J. Bogle French, an ingenious apothecary, with whom I was caſually converſing upon the ſubject, to be at the pains of making ſome experiments, on purpoſe

purpoſe to determine, whether the proportions I had commonly uſed, were the moſt proper; whether any other mucilage would ſucceed better than that which I had commonly uſed, *viz.* the mucilage made from gum Arabic; and whether ſimple agitation would not, in many inſtances, render the mixture ſufficiently uniform to be exhibited without diſguſt.

With this view divers experiments were tryed, by putting the ſeveral ingredients mentioned into a phial, and ſhaking them together. This is all that is meant, when the union is ſaid to be performed by agitation. And it appears from ſeveral of the experiments, that this proceſs is all that is neceſſary to mix ſeveral liquids together, which have hitherto required much more labour by any other method, *viz.* expreſſed and diſtilled oils, the more liquid reſins, and reſinous tincture.—There are however ſeveral ſubſtances, *viz.* the thick balſams, reſins, and many others, that cannot be treated in this manner. Theſe were firſt rubbed with

with mucilage in a glaſs or marble mortar, the other liquids then added, and, by rubbing them together, well mixed. This is all that is intended when mention is made of mixture by attrition.

It will appear from the preceding experiments, that the mucilage of *g. Arabic* is, of all others yet tryed, the moſt proper, and ſucceeds the moſt eaſily and laſtingly of any. That by means of this mucilage, and in ſome caſes even by the powder of *g. Arabic* alone, not only oils and reſins but even pinguious ſubſtances may be reduced to the form of an emulſion with water. That though even a viſcid ſyrup alone effects this union with difficulty, yet an addition of ſyrup to the mucilage, renders the union more perfect. (Exp. VI. VII.) That the addition of a diſtilled ſpirituous liquor does not prevent this union.

And that a proportion, like the following, will ſeldom diſappoint the preſcriber's expectation of forming a neat compoſition.

R. Aq.

℞. *Aq. ſimp.* ℥iſs. *Spirit.* ʒii. *Balſam.* ♈i. *Mucilag. g. Arab.* ʒſs. *Syr. ſimp.* ʒi.

Or,

℞. *Aq. ſimp.* ℥i. *Ol. amygd.* ℥ſs. *Syr. & aq. ſpir. a. a.* ʒi. *Pulv. g. Arab.* ♈i. *Vel mucil. g. Arab.* ʒſs *M. agitando.*

That, in ſome caſes, the mucilage not only acts this part the beſt of any, but conceals diſagreeable taſtes, and covers extreme pungency.

That it preſerves the ſubſtance it is thus united with, and cannot be in hazard of contracting the putrid rancidity that the yolk of eggs, the medium hitherto moſt generally uſed, is liable to.

That camphire and muſk may thus be exhibited in a liquid form, with certainty in regard to the doſe; whereas nothing is more uncertain than the preſent method of adminiſtering them in a liquid form; which, where

where the doſe can be aſcertained, is often the beſt.

For camphire given in ſubſtance, either in pills or bolus, unleſs it is very carefully mixed, will often occaſion great anxieties, from the pungency of a large particle of camphire vellicating the ſtomach. And the preſent *julepum e camphorâ* is ſeldom prepared alike in any two ſhops.

The ſame uncertainty attends the muſk when given in a liquid form; for if the compounder values himſelf on the appearance of neatneſs, perhaps great part of the muſk is thrown away. The mucilage, however, unites it with water ſo readily and intimately as to make the whole ſmooth and uniform.

Bees wax, from the difficulty of giving it in a liquid form, has hitherto been very little uſed *internally*; though in painful diarrhoeas and dyſenteries, it ſeems to promiſe conſiderable benefit. From Exp. XXVII. it appears, however, that this ſubſtance likewiſe

wiſe may be rendered miſcible with water, by firſt making the *Butyrum Cerae Bateanum*, and then dividing it farther by the powder or mucilage of *gum Arabic*. Half an ounce of the wax ſo diſſolved, with a pint of barley-water, a proper quantity of ſpirituous water and a little ſyrup, forms an emulſion that in the caſes ſpecified may be given to advantage.

Sperma ceti beat fine in a marble mortar, with an equal quantity of the Arabic mucilage, forms a ſmooth paſte, which may be kept for uſe in this condition many days. It grows ſomewhat dry and hard by keeping, but contracts no apparent acrimony or rancidity. This paſte eaſily mixes with water by attrition, and ſpeedily forms an homogeneous milky liquor. This method of manufacturing the *ſperma ceti* for extemporaneous preſcription, ſeems the more worthy of notice, as the preſcriber is ſupplied with a medicine leſs diſguſtful, and with more expedition, by this than by the uſual means, and at the ſame time with more eaſe to the compounder.

The

The moſt common method of uniting oils and waters at preſent, is, by means of ſome volatile alcaline ſalt or ſpirit; but there are many diſeaſes in which theſe are improper: oil is often preſcribed in nephritic caſes; to give it alone adds to the *nauſea* which the diſorder itſelf produces; here volatile ſpirits are foreign to the intention. The mucilage coincides with the general deſign, and produces an emulſion both grateful and ſalutary.

Another circumſtance that renders this method of exhibiting oils preferable in many caſes to that with volatile alkalies, is, that acids may be eaſily and agreeably given at the ſame time.

When I firſt began to uſe the mucilage for the purpoſe of mixing oil and water, in order to ſucceed the more effectually, I ſometimes directed a ſmaller quantity of mucilage, and likewiſe of the volatile, than would, of themſelves alone, be ſufficient to unite the oil and water together. But this, inſtead of promoting, prevented it intirely:

the mucilage curdled, its latent acid deſtroyed the alcali; and no laſting union could be obtained, even by long attrition. Hard calcarious waters likewiſe render the mixture difficult, ſometimes impracticable.

But acids have no ſuch effect; the union ſucceeds as well when dulcified ſpirits of nitre, elixir of vitriol, oil of vitriol, or any other acid I have yet tried, are added, as without them. Nay, their acidity is ſo far concealed, that a quantity may be given under this diſguiſe, in a ſmaller compaſs than by any other way I am acquainted with.

XI. *A Letter relative to the Cure of the* Chin-Cough *.

To the Medical Society in London.

Gentlemen,

THE *tuſſis convulſiva*, or chin-cough, is for the moſt part ſo troubleſome a diſeaſe, and ſometimes ſo fatal, that every hint conducive to abate its violence and prevent the dangers ariſing from it, will I doubt not be acceptable to you and the public.

I have for ſome years made uſe of the following antimonial medicine, in the cure of this diſeaſe, and often with ſo much benefit to the patient and ſatisfaction to myſelf, as to induce me to mention it caſually to many of my phyſical acquaintance.

* From the Medical Obſervations and Inquiries, vol. iii.

From ſeveral of theſe, I have received ſuch favourable accounts of its ſucceſs, as to ſtrengthen my own opinion of its efficacy; and to eſteem it, though not a certain cure in all caſes, yet perhaps as uſeful a medicine in this diſtemper, as any we are yet acquainted with.

The compoſition is the following:

℞ *Pulv. e chel. cancr.* ʒ ß.
Tartar. Emetic. gr. ij.
Accuratè miſceantur.

The teſtaceous powder, in this caſe, is not particularly deſigned for any other uſe, than that of making the *emetic tartar* diviſible into very ſmall doſes with preciſion, and without difficulty. This proportion was fixed upon, as the whole is diviſible without a fraction; each grain of the powder containing one 16th part of *emetic tartar*. Where a very ſmall portion of this is wanted, the bulk may eaſily be increaſed by the addition of ſome other, or the ſame teſtaceous powder: where more of the *emetic*

tartar is wanted, the quantity of the doſe is then ſufficient.

One grain, one grain and an half, or two grains of this compoſition, may be added to five or ſix of any teſtaceous powder, and given in a ſmall ſpoonful of milk and water, in the forenoon between breakfaſt and dinner, to a child of a year old: if this quantity does not prove ſufficient to excite vomiting, it ſhould be increaſed the next day to ſuch a doſe as will produce this effect; and, in this manner, let it be daily repeated about the ſame hour.

This time of day, viz. between breakfaſt and dinner, has been fixed upon preferably to any other, on theſe conſiderations, viz.

If the puke is given early, the ſtomach being empty, a ſtraining, too great to be borne without detriment, might be occaſioned.

Was it given in the evening, the child would, perhaps, be robbed of too great a quantity of nutriment. Children's break-

faſts are, for the moſt part, ſoon digeſted; at leaſt, ſo much nutriment is taken up in a ſhort time, as that much inconveniency cannot enſue from the loſs of aliment.

At night, when the fever is vehement, half the former doſe of antimonial powder is given, with a few grains of *nitre*, and the *pulv. contrayerv. c.* This generally procures an agreeable *diaphoreſis*, and takes off ſome part of that moiſture which might probably have otherwiſe increaſed the irritation and oppreſſion of the lungs.

It is but ſeldom that phyſicians are conſulted at the beginning of this diſeaſe, as, for the moſt part, its acceſs is ſlow, and gives but little alarm, till it becomes ſo evident, as to render it difficult to do any thing more than mitigate the ſymptoms.

But, in moſt caſes, and in every ſtage of the diſeaſe, I have chiefly truſted to this proceſs; ſeldom having occaſion either to bleed, or to uſe any other kind of evacuation, unleſs to procure a ſtool or two daily, if the medicine

medicine above mentioned fails in this reſpect.

In this caſe a proper doſe of *magneſia*, given at bed-time, with the antimonial, ſeldom fails of anſwering our expectations. Sometimes no very manifeſt advantage appears to be gained by this proceſs in ſeveral days; but, if no material inconveniency ariſes, it will be right to proceed.

The firſt ſymptom of amendment uſually is, that the fits of coughing become leſs frequent, the fever abates, and the breathing is not ſo difficult; the fits however do not ſeem to leſſen much in point of violence, for ſome days; at length, however, the cough decreaſes, and every other ſymptom abates.

The child is then directed to take the puke only two days together, and omit it the third. Every other day will ſoon ſuffice, and, then, once or twice a-week till the cough is wholly gone.

During this proceſs, they are directed to drink aſſes milk, to eat ſparingly of the lighteſt meats, broth likewiſe, and milk in any ſhape. Quantity is ſtrictly to be regarded; for the more and oftener the ſtomach is filled, to the leaſt degree of oppreſſion, the longer the diſeaſe continues, and with greater violence.

The ableſt of the faculty and thoſe of the moſt extenſive experience have found, that to empty the ſtomach of its contents frequently has been the means of affording moſt relief. Oxymel of *ſquills* and *ipecacuanha* have ſtood foremoſt in the liſt of remedies for the whooping-cough, a conſiderable time; and this apparently from the good effects obſervable from their operation.

This induced me to make trial of the remedy in queſtion, as having theſe particular advantages.

The medicine is almoſt taſteleſs, is in quantity very ſmall, and may be given in the moſt

moſt unſuſpected vehicle: no inconſiderable benefits, where we have to do with ſuch patients as are moſt expoſed to this terrible diſtemper.

It is, undoubtedly, more antiphlogiſtic than either of the medicines above mentioned, is leſs irritating in general, yet operates with equal certainty, and, perhaps, more energy.

It is a powerful diaphoretic; the good effects of which, in this caſe, have been already mentioned.

One thing, however, may be neceſſary to obſerve, in reſpect to the preparation I have deſcribed. It has been hinted to me, that it will not long preſerve its efficacy; and this decay is ſuppoſed to ariſe from the tartar being robbed of its acid by the abſorbent powder. This, if true, ſhould induce perſons to mix but a ſmall quantity at once, to keep it perfectly dry, taking care eſpecially, that the *emetic tartar* be prepared by a ſkilful hand.

I have

I have purpoſely omitted any reflections on the nature of this diſeaſe, or particular deſcriptions of its progreſs, any farther than as they were connected with the hiſtory of this medicine, as I know your deſign is rather to collect matters of fact than to build ſyſtems.

I would not, however, be underſtood to ſuppoſe, that this medicine will alone complete the cure of the whooping-cough, at all times, and under all circumſtances: I know it will not; and that this, as well as every other medicine, is uſeful or otherwiſe, juſt as it is indicated. *Cantharides*, the *bark*, *muſk*, *caſtor*, and many other medicines, have doubtleſs been of great uſe in particular caſes, and may be in peculiar epidemic conſtitutions.

XII. *Obſervations on the Uſe of* Hemlock *.

SOON after Dr. Storck's account of the *cicuta* was publiſhed, I had ſeveral opportunities of trying it in the diſorders for which it was ſo ſtrongly recommended; but with many others of the faculty, I had too great cauſe to lament, that a ſpecific remedy for cancerous complaints was ſtill undiſcovered.

Nevertheleſs it appeared to be a medicine of great efficacy; and though it by no means anſwered my wiſhes in the cure of cancers and cancerous tumours, yet it ſeemed ſtill worthy of farther trials, has proved beneficial in various obſtinate complaints, and tho' I cannot produce one inſtance of a cancer cured by the *cicuta*, yet I can recollect ſeveral in which the pains have been mitigated for a time, the progreſs checked, and the

* From Medical Obſervations and Inquiries, vol. iii.

diſcharge

diſcharge changed for the better in reſpect both to colour, ſmell, and conſiſtence.

The following caſe may perhaps deſerve a place here, as one proof of theſe effects:

A gentleman, from one of our South American colonies, middle-aged, healthy, temperate, and active, had a wart-like ſubſtance grew up on one ſide of his noſe, not far from the inner *canthus*; and as I remember from an accidental injury. It gave him no pain, nevertheleſs he frequently endeavoured to pluck it off; by which it grew ſore and uneaſy. A practitioner there, promiſing him a certain and ſpeedy cure, applied *eſcharotics*, and increaſed the miſchief.

Being thus diſappointed of a cure, and the diſeaſe every day increaſing, he came to England in the ſummer of 1763. The ulcer had, by this time, deſtroyed the teguments almoſt round the orbit, and eat deep into the upper ſide of the ſocket. The globe of the eye remained, but wholly uſeleſs in reſpect to viſion, and almoſt without motion,

tion, the muſcles being deſtroyed. The pains were acute both in the globe itſelf, and parts ſurrounding, which were exquiſitely tender, and the ichorous diſcharge was extremely foetid. He had long been under the neceſſity of taking large doſes of laudanum to procure ſome remiſſion from pain during the nights.

Under theſe circumſtances the *hemlock* was recommended to him. He took at firſt twenty grains a day, eight at noon, and twelve at night. This in a few days leſſened his pain, and the quantity of laudanum was reduced in proportion. At length it was wholly laid aſide, the *hemlock* mitigating the pain intirely, without producing coſtiveneſs, thirſt, or head-ach. The doſe of *hemlock* was gradually increaſed to ſeventy grains a day: if he proceeded farther, it either made him ſickiſh, or created a ſingular kind of head-ach and giddineſs. Sometimes he grew weary of taking it, and omitted it for ſeveral days, and returned to it again as his pain or other circumſtances required. He is ſtill living, and ſtill continues to make uſe of

of the *hemlock*; and though the ulcer yet ſpreads, and moſt probably will do, whilſt he lives, yet its progreſs has been remarkably ſlow, compared with its advances before the uſe of this medicine; its aſpect is more kindly, the diſcharge of a better conſiſtence, and the ſtench, while he takes the medicine, is ſo much diminiſhed, that thoſe who have occaſion to be near him can eaſily diſtinguiſh when he is taking the *hemlock*.

Various attempts were made with the *cicuta* externally, in infuſions, decoctions, and ſolutions of the extract in different liquids and different proportions; but they all gave more or leſs pain, and left an uneaſy ſtiffneſs round the edges of the ſore.

In a cancerous affection of the tongue, the extract of *hemlock* procured great relief; it abated the ſtench and eaſed the pain: but the relief was only temporary, and at length it failed in affording any eaſe, or retarding the progreſs of the fatal diſorder.

It

It is not very uncommon to perceive, in theſe dreadful evils, ſome abatement of the ſymptoms ſoon after taking the *cicuta*, but the effects are too ſeldom laſting.

I have given it repeatedly in tumours apparently of a cancerous tendency; it has ſeldom ſucceeded to my wiſhes, in large ones eſpecially; in ſmall incipient hardneſſes in the breaſt, and other parts, I think it has been of uſe.

But the trials I have made of the medicine have not been confined to this claſs of diſorders. In ſcrophulous diſtempers, I think it has been much more beneficial than in the preceding: the firſt caſe in which it was given, turned out ſo favourably, as to induce me to think of it with ſome partiality; and to uſe it freely, though I own not always with equal ſucceſs. When the *cicuta* was introduced into public notice by Dr. Storck, the following caſe was under my care, viz.

A young gentlewoman of a thin habit, pale complexion, about twenty-eight years

years of age, had been afflicted at times, from her infancy, with ſcrophulous complaints: ſevere *ophthalmies*, glandular ſwellings, and other concomitants of this diſeaſe.

To remove theſe, no endeavours had been wanting; the ableſt of the faculty had ſucceſſively been conſulted, and many famed empirical medicines had likewiſe been made uſe of. She had taken, under my directions, a decoction of ſarſaparilla, the bark, mild mercurials, ſea-water, and other efficacious medicines, but without benefit.

When a trial of the *cicuta* was thought of, ſhe laboured under the acuteſt *ophthalmy* ſhe had ever endured; her pulſe ſmall and feeble, her reſt and appetite diminiſhed, the *menſes* in ſmall quantities and pale, and every ſecretion irregular. The glands on each ſide the neck down to the clavicles were ſwelled and hard, on one ſide particularly. And ſuch was her extreme ſenſibility of light, that ſhe ſat conſtantly on her bed within thick ſtuff curtains, and the light was excluded with the

the utmoſt care; the opening of her chamber-door gave her much pain.

Such was her ſituation when we began the *hemlock*; it was in the infancy of its uſe, and the doſes at firſt were ſmall. Some weeks had eſcaped before we got up to twenty grains a day. But the extract we uſed was good, and, ſmall as the doſes were, ſo much benefit was ſoon perceived as encouraged a ſteady perſeverance and an augmentation of the doſe. The *ophthalmy* quite went off, the ſwelling of the largeſt glands was conſiderably reduced, that of the ſmaller diſperſed, a better ſtate of health returned than ſhe had known for any length of time together, and has continued ſo ever ſince. She perſiſted in the uſe of the extract conſtantly for more than a year, and without perceiving then or ſince any ill effects from it, in any reſpect.

I have ſince given it in many other ſcrophulous caſes, and frequently with advantage, to adults eſpecially; and indeed it is to them that I have for the moſt part

preſcribed it, as children ſeldom can take any quantity of pills, and in any other form it is diſguſtful, if long continued. If the extract in any reſpect diſagrees, it is more difficult to learn this from children than adults; and, when given to children even in very ſmall doſes, I think it has produced ſlight ſpaſmodic affections. For theſe reaſons, I ſeldom uſe it in very young ſubjects, or in others of extremely irritable habits.

At the ſame time that the *cicuta* was adminiſtered in the caſe above mentioned, I made trial of it in the following:

A perſon of a thin and rather delicate habit, naturally healthy, about the thirtieth year of her age, began to have numerous red pimples break out about her mouth, noſe, and cheeks, with frequent and violent head-achs. The *menſes* became too copious, a *fluor albus* conſtantly followed; ſhe grew coſtive, loſt her appetite and ſtrength; obvious indications of acrimonious juices, and relaxed ſolids; the conſequences

quences of much anxiety, labour and ſolicitude.

Her face grew daily worſe, the pimples increaſing in number, magnitude, and hardneſs; forming ſmall tumours that ſometimes ſuppurated, but always ſlowly and with great pain; now and then ſome of the largeſt aſſumed a livid hue, and continued long in that condition.

The utmoſt care was taken in reſpect to diet, both as to quantity and kind; ſhe was extremely temperate in reſpect to liquors of any ſort; and, if any errors were committed, they aroſe from too much exerciſe in her family, and too conſtant ſolicitude.

To deſcribe all the attempts that were made in order to mitigate theſe complaints, with their various ſucceſs, would be uſeleſs, as they were ineffectual: it may ſuffice to obſerve, that ſhe followed the methods preſcribed for her with unremitting diligence, but without the deſired effect.

She was attacked with a tedious depreſſed fever while theſe endeavours were uſing, which left the hairy ſcalp of her head almoſt covered with ſmall *ſteatomatous* tumours, from the bigneſs of half a pea to the ſize of half a large walnut; the appearances in her face continuing the ſame, both in reſpect to number as well as pain, which, in froſty weather, was almoſt inſupportable.

Though nothing cancerous could be ſuſpected from her parents or her natural conſtitution, yet the hard livid tubercles on her face, yielding to no method hitherto attempted, created fears of their tending to miſchief: and this put me on trying the *hemlock*. She took it at firſt in ſmall doſes, increaſing the quantity as ſhe found ſhe could bear it, and kept to it ſteadily, during the autumn, winter, and following ſpring.

The good effects ſoon became viſible in every reſpect. Her face grew clearer and better than it had been for ſome years; the immoderate diſcharges were reduced to a reaſon-

reaſonable quantity; the *ſteatomatous* tumours on her head were much leſſened, and ſhe enjoys better health, by the uſe of this medicine ſingly, than ſhe has done for ſeveral years. When ſhe finds any return of her former complaints, ſhe conſtantly has recourſe to the extract, which always gives her relief.

Permit me to mention a few more caſes, in which I have uſed this medicine with advantage.

A middle-aged man, healthy, active, and temperate, was attacked with a pain in one cheek-bone, about the *antrum Highmorianum*, and for which he could aſſign no cauſe. It grew to be ſevere, and continual, but was ſometimes heightened to a degree almoſt beyond bearing. Though a native of England, his reſidence was then in one of our North American colonies. He applied to many very able practitioners there, but without obtaining more than a temporary mitigation, by opiates. Mercurials, antimonials, alteratives, the bark, warm, cold,

and ſea-bathing; drains of every kind were made uſe of, but to no purpoſe. Several teeth were drawn, and an opening made into the *antrum*, but fruitleſly. The pain ſometimes was abated, but it never wholly went off; its returns were frequent, ſeveral times in an hour, and excruciating; ſo as to produce ſpaſmodic contractions of every muſcle about the face and neck, and even affecting the whole body.

Under theſe circumſtances he arrived from America, and brought with him an exact detail of the progreſs of his diſeaſe, and the means made uſe of for his relief.

Until I could have leiſure to conſider the caſe attentively, and what farther might be reaſonably propoſed, I ordered him to take the extract of *hemlock*, beginning with twenty grains a day, and directed him how to proceed in increaſing it.

He called about a week after (the time I had fixed), when I obſerved his countenance to be ſomewhat leſs diſturbed, and he owned himſelf

himſelf rather better. He was adviſed to continue in the ſame method, which he did very conſtantly during the autumn and winter. In the ſpring, as he found himſelf much better, he took the medicine leſs regularly, and returned to America almoſt free from pain, and intirely ſo from any of thoſe ſpaſmodic contorſions, which accompanied him almoſt inceſſantly at his arrival. He took no other medicine during the whole time.

The following caſe perhaps may likewiſe be worth reciting:

A healthy ſober young man applied to me in the ſpring 1766, on account of a pain in his arm. The part affected was from about the middle of the *biceps*, down the inſide of the arm to the wriſt. He knew of no particular accident that had brought it on, except taking cold; it was deemed rheumatic, and he had endured it a conſiderable time before I ſaw him. It was neither ſwelled, diſcoloured, or ſore to the touch; and alike uneaſy, both day and night.

It was treated as a rheumatiſm; mercurial alteratives, decoctions of the woods, the bark in various ſhapes, antimonials likewiſe and anodynes, were made uſe of; but without gaining any conſiderable benefit. He then took the extract of *hemlock* in a full doſe about a fortnight, when he found the pain began to abate. He continued it during the ſummer regularly, got perfectly well, and ſo remains.

A few inſtances of this kind naturally induce one to apply a remedy like this, in very diſſimilar caſes.

A married woman, between thirty and forty, a long time infirm, ſubject to coughs, hectic heats, and a train of complaints, ariſing from ſmall *vomica's* being frequently formed in the lungs and diſcharged, applied to me ſoon after a large one had broke. She had then a copious purulent *hæmoptoe*, inceſſant cough, quick ſmall pulſe, night ſweats, with loſs of appetite, and loſs of ſtrength. Soft demulcent cooling pectorals were given, with anodynes frequently in ſmall

ſmall quantities, but to no purpoſe. A light decoction of bark with elixir of vitriol and anodynes ſucceeded no better. The extract of *hemlock* was then ordered to be taken three times a day, and to be waſhed down with a few ſpoonfuls of tincture of roſes. The patient was ordered into the country, and I ſaw her no more, nor heard any thing of her, till I was informed, ſeveral months afterwards, that, from the time ſhe commenced this courſe, ſhe began to recover, kept in town, and grew well.

I was induced to make trial of it in this caſe, from conſidering the moſt uſual effects of *hemlock*. It is anodyne, corrects acrimony, and promotes the formation of good matter.

I have ſince made uſe of it in various pulmonic diſorders, though but ſeldom with the like ſucceſs. Where there are ſymptoms of tubercles forming, a ſtrumous habit, and a tendency to *phthiſis* from theſe cauſes, I believe it will often be ſerviceable. But to deſcribe the various trials I have made,

made, and the various ſucceſs, would lead me beyond the bounds of an eſſay ſuitable to your deſign.

There are ſome things, however, which I muſt beg leave to mention more particularly, as they ſeem to me of conſequence in the uſe of the *cicuta*.

It is well known with what avidity the public embraced the expectations given by Dr. Storck. Every body made the extract, and every body preſcribed it. We ſoon found it would not perform all the wonders aſcribed to it, and, falling into the oppoſite extreme, many declared it would do nothing, and diſmiſſed it with diſgrace.

Much of the extract, hitherto uſed, has not, I believe, been made with due attention to the ſeaſon when the plant is in its greateſt perfection. So ſoon as the plant appeared ſtrong and ſucculent, it was commonly gathered for uſe. But I know from repeated experiments, that the extract, prepared from *hemlock* before the plant arrives at maturity, is much

much inferior to that which is made when the *hemlock* has acquired its full vigour, and is rather on the verge of decline: juſt when the flowers fade, the rudiments of the ſeeds become obſervable, and the habit of the plant inclines to yellow, ſeems the proper time to collect the *hemlock*. It has then had the full benefit of the ſummer heat, and the plants that grow in expoſed places, will generally be found more viroſe than thoſe that grow in the ſhade.

In reſpect to the manner of preparing this extract, it may be neceſſary to obſerve, that the leſs heat it undergoes the better. Therefore, if a conſiderable quantity of the dry powder of the plant, gathered at a proper ſeaſon, is added, the leſs boiling will be neceſſary, and the medicine will be the more efficacious.

But let the extract be prepared in what manner ſoever it may, provided it is made from the genuine plant, at a proper ſeaſon, and is not deſtroyed by boiling, the chief difference obſervable in uſing it, is, that a larger

larger quantity of one kind is required to produce a certain effect, than of another.

I have found that twenty grains of one ſort of extract have been equal in point of efficacy to thirty, nay near forty of another, yet both of them made from the genuine plant, and moſt probably prepared with equal fidelity.

To prevent the inconveniencies ariſing from this uncertainty, it ſeems always expedient to begin with ſmall doſes, and proceed, ſtep by ſtep, till the extract produces certain effects, which ſeldom fail to ariſe from a full doſe.

Theſe effects are different in different conſtitutions. But, for the moſt part, a giddineſs affecting the head, and motions of the eyes, as if ſomething puſhed them outwards, are firſt felt; a ſlight ſickneſs, and trembling agitation of the body; a laxative ſtool or two. One or all theſe ſymptoms are the marks of a full doſe, let the quantity in weight be what it will. Here we muſt ſtop till

till none of these effects are felt, and, in three or four days, advance a few grains more. For the general experience of all who have used this medicine to any good purpose, with whom I have any acquaintance, agrees, that the *cicuta* seldom procures any benefit, though given for a long time, unless in as large a dose as the patient can bear, without suffering any of the inconveniencies above mentioned.

Patients commonly bear a greater quantity of the extract at night, than at noon; and at noon, than in the morning. The method I commonly follow is to order ℈ij. to be divided into thirty pills, not gilt. Adults begin with two in the morning, two at noon, and three or four at night, with directions to increase each dose, by the addition of a pill to each, as they can bear it.

The extract of *hemlock*, given in this manner, is apparently anodyne; it promotes rest, and eases pain. It seldom creates thirst, or that kind of morning

head-ach, which ſucceeds an opiate of any kind.

It ſeldom occaſions coſtiveneſs, but, in moſt, it procures a laxative ſtool the day following.

In ſome habits very ſmall doſes offend the ſtomach, excite ſpaſmodic twitchings, heat and thirſt. In ſuch caſes I immediately forbid its uſe.

From the certain quality it poſſeſſes of altering the property of a thin, corroſive, cancerous ichor, and changing it to a milder fluid, I have been induced to try it in ſanious ulcers, and gleety, painful diſcharges from the *vagina*, and often with ſucceſs. Alſo in fixed excruciating pains, probably ariſing from acrimony, not diſſimilar to that of cancers.

The *Materia Medica* is already loaded with a number of very inefficacious ſimples, and it would give me extreme concern to aſſiſt in adding another to the catalogue: but, from

from the obſervations I have had an opportunity of making, and from the concurrent opinion of ſeveral of my medical acquaintance, I perſuade myſelf, that the *cicuta* will be an uſeful acquiſition, and will aſſiſt us in the cure of many diſeaſes, in which the medicines now in uſe are inadequate auxiliaries.

XIII. *Re-*

XIII. *Remarks on the* Hydrocephalus Internus *.

I HAVE for a long time propoſed to myſelf, to lay before you ſome account of a diſeaſe which occurs more frequently, I believe, than is generally apprehended, and is very often confounded with another, to which, in many reſpects, it appears not diſſimilar; yet ariſes from a very different cauſe. At the ſame time, I muſt own to you, it is not in my power to ſuggeſt any probable means of curing the diſeaſe of which I treat: it has baffled all my attempts, both when confided in alone, and in conſultation with the ableſt of the faculty. All that I pretend to do is, to exhibit ſuch an idea of this diſeaſe as may ſerve to make it known when it occurs in practice, and to form ſuch a prognoſtic of its progreſs and event, as may juſtify practitioners to themſelves, and to the families in which ſuch fatal occurrences may preſent themſelves.

* From the Medical Obſervations and Inquiries, vol. iv.

I have

I have juſt peruſed Dr. Robert Whytt's hiſtory of this diſtemper, in his works, lately publiſhed, in a tract at the end. The Doctor has done more in elucidating this ſubject, than any of the writers I have ſeen. It will appear from what I have to ſay on this ſubject, that we perfectly agree in the ſeat of the diſeaſe, in moſt of its ſymptoms, and in its fatality. Nevertheleſs, in ſome points, our obſervations have led us to make different concluſions.

The diſeaſes to which this I am treating of bears the neareſt reſemblance, are ſuch as are ſuppoſed to proceed from worms; and what increaſes the reſemblance is, that they are, for the moſt part, diſeaſes of the ſame age. I have ſeldom met with the *hydrocephalus* in ſubjects younger than three years; moſt frequently it has happened, in my practice, from five to ten; two or three from ten to thirteen, and two caſes between ſeventeen and nineteen years of age. The laſt four were girls; the former moſtly boys; and none of them peculiarly unhealthy before they were attacked with this diſeaſe.

Moſt of them had gone through the ſmall-pox, ſome the meaſles likewiſe; but without any reaſon to ſuſpect that theſe had left any foundation for this terrible complaint.

It happened, that ſeveral of thoſe who firſt of all came under my care in this diſeaſe, were either the favourites of the family, or the ſole hopes of their parents. I do not mention this as having any thing to do with the diſeaſe itſelf, but as the cauſe of my not being able to learn what the diſtemper really was, ſo ſoon as I could have wiſhed. It was difficult to aſk, and ſtill more difficult to obtain leave, under ſuch tender circumſtances, to examine the ſubject. At length, however, I ſucceeded, and, in ſeveral diſſections, found the ſame cauſe ſubſiſting; viz. a collection of clear pellucid lymph, amounting in quantity, by appearance, to 2, 3, or 4 ounces, contained in the ventricle of the brain, under the *corpus calloſum*, from whence it was impoſſible to diſcharge it by any medicine or operation hitherto diſcovered.

The

The firſt caſe I met with I ſuſpected was owing to worms, and thought myſelf fully juſtified in exhibiting the moſt efficacious anthelminthics I was acquainted with, applying ſuch other remedies as particular exigencies required. When another caſe like this caſt up, I early took the alarm, and requeſted aſſiſtance; but we were as unfortunate as I had been before. Once, ſometimes twice in a year, for ſeveral ſucceeding years, I had occaſion to ſee theſe unhappy objects. Of late years, they have not occurred to me quite ſo frequently, though I am now lamenting a diſaſter of this ſort, which has deprived a large and honourable family of the only male amongſt them.

Two or three inſtances I have met with, that had very ſtrong appearances of being entered into the laſt ſtage of this diſorder, but were happily recovered; they were actual worm-caſes, and were cured by anthelminthics. I had been led, from theſe appearances that were ſo ſimilar to thoſe which attend the *hydrocephalus*, to judge it was the

ſame, and to form an unfavourable prognoſtic.

Dr. Whytt ſuppoſes, that the commencement of this diſeaſe is obſcure; that it is generally ſome months in forming; that, after ſome obvious urgent ſymptoms make aſſiſtance neceſſary, it continues ſome weeks before it ends fatally. This, in general, differs from what I have hitherto obſerved. I have ſeen children, who, from all appearance, were well, healthy, and active, ſeized with this diſtemper, and carried off in about fourteen days. I have ſeldom been able to trace the commencement of it above three weeks. We know very well how often thoſe who are unacquainted with theſe things aſcribe the beginning of diſorders to wrong cauſes, and date them from æras with which they have no connection. Thus every malady to which a child may be incident through the courſe of many years, ſhall be attributed to the ſmall-pox, a worm-fever, or ſome other diſeaſe, that has thoroughly rouſed the parents fears, though that very diſeaſe may have been happily termi-

terminated. One cannot be ſufficiently upon one's guard in aſcribing effects to cauſes that exiſted at a remote period.

In moſt of thoſe whom I have ſeen in this diſtemper, a pain in ſome part or other below the head was the firſt thing they complained of; moſt commonly about the nape of the neck and ſhoulders, often in the legs, ſometimes in the arms, but more rarely.

This pain was not always alike acute, nor always fixed to one place; ſometimes it ſeemed not to affect any of the limbs. In theſe caſes, the head and ſtomach ſeemed to be more diſordered; and indeed were always diſordered more or leſs from the beginning, as far as I could learn. When the pain was in the limbs, the ſickneſs or head-ach was leſs; when the head became the ſeat of complaint, the pain in the limbs was ſeldom or ever mentioned: ſome had very violent ſickneſſes and violent head-achs alternately.

From being perfectly well and ſportive, ſome were ſeized with theſe pains in the limbs, or with ſickneſs, or head-ach ſlightly, in a few hours, commonly after dinner. Some have been obſerved to droop a few days before they complained of any part being much indiſpoſed. In this manner they continued three, four, or five days, more or leſs, as the children were healthy and vigorous, when the diſtemper begins to ſhew itſelf in an alarming manner.

They then commonly complain of a moſt acute pain in the head, deep ſeated, and extending acroſs the forehead from temple to temple. They are generally very ſick between whiles, crying out in the moſt affecting manner, *Oh, my head! Oh, I am ſick!* alternately, and with ſhort intervals; doſing a little in theſe intervals, breathing irregularly, and ſighing much while awake. Sometimes they only ſeem to breathe in ſighs for ſome minutes together.

The pulſe, from being regular as in health, as the diſeaſe creeps on becomes irregular;

regular; ſlower, for the moſt part, at firſt than it ought to be; it grows ſtill ſlower as the pain increaſes, gradually likewiſe irregular, the ſtrokes being made both with unequal force and in unequal times. The limbs, for the moſt part, are temperate, in reſpect to heat, after the firſt acceſs, which is often attended with feveriſh heats, eſpecially towards evening and fore-part of the night, and till within a day or two of their diſſolution; the pulſe then becomes extremely quick, the breathing deep, irregular, and laborious, the heat exceſſive, and more general. The head is always hot from the firſt attack, and the *praecordia* likewiſe.

Almoſt every ſymptom that is known to attend an irritating cauſe exiſting in the brain, appears in its turn; firſt, pain in the limbs, ſickneſs, and head-ach.

Short diſturbed ſleeps, ſtartings, irregular pulſe, watchfulneſs, and the pupils of the eyes much dilated.

They are unwilling to be diſturbed for any purpoſe, are averſe to light, take things greedily, and cannot bear any poſture but that of lying horizontally. They attend leſs to objects; when aſleep, great part of the whites of the eyes are ſeen, and they are undiſturbed by any thing but moving them. Their urine comes away inſenſibly, and their ſtools likewiſe. They often ſcream out moſt piercingly, but complain of nothing. One or both hands are moſt commonly about their heads. At length the eye-lids become paralytic, the *iris* immoveable: it gives them no apparent uneaſineſs, if one raiſes the eye-lids with one's finger two or three days before they die. The heat of the head and trunk becomes exceſſive; a great heat and ſweat ſpreads over the whole body, reſpiration is altogether ſuſpirious, the pulſe trembling, and quick beyond the poſſibility of counting, and the patient goes off gradually as the ſtrength fails; ſometimes a ſpaſm finiſhes the cataſtrophe.

One ſees, in this recital, many ſymptoms that are familiar to worm-caſes, teeth, and other

other irritating cauſes. Perhaps, it will be difficult to point out any that ſhall particularly characteriſe this diſeaſe. The pains in the limbs, and inceſſant head-ach, and ſickneſs, ſeem to me the moſt certain intimations of the danger. Theſe happen in other diſeaſes of children, but neither ſo uniformly nor ſo laſtingly.

Another circumſtance likewiſe is familiar, if not peculiar to this diſeaſe: I recollect not one inſtance, in which the patient was not coſtive, and in which likewiſe it was not without ſingular difficulty that ſtools were procured.

The ſtools are moſt commonly of a very dark greeniſh colour, with an oilineſs or a glaſſy bile, rather than the ſlime which accompanies worms. They are, for the moſt part, ſingularly offenſive. The urine ſhews nothing to be depended on: it is various both in colour and contents in different ſubjects; depending chiefly on the quantity of liquids they get down, and the time between the diſcharges of urine. From their unwil-

lingneſs

lingneſs to be moved, they often hold their water a long time; twelve or fifteen hours, ſometimes longer; they ſeldom complain of their belly: indeed when they complain of ſickneſs, they mention their belly; but, if one deſires them to point to it, they always lay their hand on the ſtomach. In diſorders from worms, this is not ſo generally the caſe. In theſe complaints, and thoſe attending dentition, ſpaſms are more frequent than in the diſtemper I am deſcribing. Children ſubject to fits, are ſometimes ſeized with them a few days before they die; ſometimes they continue for twenty-four hours inceſſantly, and till they expire; but this is not conſtant.

The moſt certain character marks itſelf indeed but too evidently, when one ſees all thoſe ſymptoms gradually advancing which attend a violent depreſſion of the ſcull; when a comatous oppreſſion ſeizes the brain, and diminiſhes, by degrees, all the faculties, till they are at length totally extinguiſhed, either by ſome violent ſpaſmodic efforts, or the *vires vitae* are exhauſted.

With

With Dr. Whytt, I have called this diſeaſe the *Hydrocephalus internus*, or dropſy of the ventricles of the brain, till ſome more appoſite name can be given to it. From what remote cauſes it may proceed, I am not ſo well ſatisfied as to decide on this point. Whether the breach of a lymphatic may not more commonly be the proximate cauſe, is ſubmitted to conſideration. It is a diſorder that happens, ſo far as I have had an opportunity of obſerving, more commonly to healthy, active, lively children, than to ſuch in whom, from previous indiſpoſition, there is room to ſuſpect an unequal or weakened abſorption.

And indeed, if we conſider the numberleſs little feats of activity that children of both ſexes are diſpoſed to, we cannot wonder that a veſſel of ſlight texture ſhould give way on ſome occaſion or other. I am the more inclined to be of this opinion, from the progreſs of this diſeaſe in many of the caſes that I have ſeen of it; from reflecting on the *juvantia* and *laedentia*; and, from this circumſtance being generally true, that

in

in ſtrong vigorous conſtitutions, the diſeaſe is fatal in a ſhorter time than in the tender and diſeaſed, though perhaps not leſs active diſpoſitions. Sometimes I have been told, that the diſeaſe was thought to have taken its riſe from jumping from a conſiderable height upon a hard floor, a fall, or ſome pretty ſmart exerciſe: but however favourable ſuch accounts may be to the opinion already mentioned, yet I offer them with diffidence, and only with a view to promote further inquiry.

Were I to recite the different attempts to cure this diſeaſe, made both alone, and conjunctly with ſome of the ableſt in the profeſſion, it would carry me beyond the bounds you have a right to preſcribe. It may be ſufficient to mention, that, whenever I am called to a patient in the earlier ſtages of this diſtemper, I proceed in the ſame manner as if the diſeaſe was ſuppoſed to ariſe from worms, or ſome cauſe of irritation capable of being removed.

Three or four grains of *calomel*, or more, according to the age and habit of the patient, with *rhubarb* and the *pulv. e ſcam. compoſ.* are given to empty the bowels, if this has not been done before ſufficiently. If the ſtomach appears to be loaded, $\frac{1}{4}$ or $\frac{1}{2}$ a grain of the *emet. tartar.* may be joined with it, and the ſtomach waſhed with any ſuitable liquor.

After this, it ſeems prudent to abate the vomiting by the ſaline, abſorbent medicines, adding a few drops of the *tinct. Theb.* as occaſion requires, giving broth, thin decoctions of hartſhorn-ſhavings, and other ſuitable ſupport, as may be neceſſary.

Anthelminthics in broth are thrown up in clyſters, and ſmall doſes of anodynes occaſionally exhibited. A decoction of *ſem. ſanton.* with 30 or 40 drops of *ol. terebinth.* in 3 or 4 ounces of broth; or aloes boiled in milk. All heating medicines ſeem to increaſe the malady; ſo does much warmth in the room.

If

If the diſeaſe actually proceeds from worms, the ſymptoms are moſt commonly at a ſtand after this proceſs, and, by a repetition at proper diſtances, it ſoon gives way; but, if the ſymptoms not only continue, but increaſe after a prudent repetition of theſe medicines, or ſuch as different practitioners may have found to be ſucceſsful in worm caſes, there is too much reaſon to fear that the diſtemper is of a more fatal kind, and that the moſt ſtrenuous and well-directed endeavours will probably afford no relief.

One ought not, however, to ceaſe attempting to mitigate the moſt preſſing ſymptoms, by all the means in our power. The application of bliſters, ſinapiſms, embrocations externally; the leſs heating antiſpaſmodics, internally; and, at all times, taking care to keep the bowels, as much as may be, free from impurities, will, perhaps, afford ſufficient means to anſwer every reaſonable indication.

I need ſcarcely mention, that every opportunity of inſpecting the body ſhould be ſought

ſought for by the faculty. Dangerous and incurable as it ſeems to be, its ſeat only known, and its fatal iſſue, we ought not to deſpair of tracing its beginning a little higher, aſcertaining the cauſes, and fix its character with more preciſion. By treating the complaint, however, in the manner above mentioned, we loſe no advantage: we are almoſt ſure to ſucceed if the caſe be only worms; but if otherwiſe, we at leaſt are treating it in the moſt rational method, increaſing all the ſecretions, and thereby preventing any addition to the quantity of extravaſated fluid, to the utmoſt of our power.

From the preceding deſcription of this caſe, it will not be difficult to account for the ſymptoms; nor will it appear ſurpriſing, that the patients go off in the ſame manner as thoſe who die of a depreſſion of the ſcull; for it makes very little difference whether the external parts of the brain are crouded on the more central parts, or a fluid is perpetually preſſed into the cavities, near the center, ſtrongly forcing their ſides and the brain

brain itſelf againſt the ſcull. So far as one can learn from the unhappy ſubjects themſelves, the kind of pain they feel, is not quick and darting, or like that of a boil or inflammation; but, though acute, is tenſive, and as if forcing the head aſunder.

When this paper was read to the MEDICAL SOCIETY, Dr. Huck ſaid, he believed that this diſeaſe was not confined to children, or ſuch as were under puberty only; for he imagined that he had ſeen it two or three times in adults, and gave me the following caſe, where diſſection put it out of doubt.

Hannah Hargrave, aged 30, was admitted into the Middleſex hoſpital, on the 25th of October 1768. She was extremely languid, and ſo oppreſſed, that ſhe could not give a very diſtinct account of her illneſs. She ſaid, that ſhe had been ſick a week; that her chief complaint was a moſt excruciating pain in her head, with a vomiting of every thing ſhe took, mixed with green ſtuff: ſhe ſaid ſhe was coſtive, giddy, thirſty, had great palpitations, and could get no ſleep: her

heat was not greater than in health: her pulſe beat 78 ſtrokes in a minute; ſhe had her menſes at that time. No means that were uſed gave her any relief: the head-ach, vomiting, though leſs frequent, and watchfulneſs, continued. On the 4th of November ſhe was light-headed, ſighed and moaned frequently: the pupils of her eyes were greatly dilated, and I thought ſhe could not ſee. On the 5th, I firſt obſerved a *ſtrabiſmus*; ſhe gathered up the bedclothes; her teeth were furred; but her tongue was not very dry; her pulſe was almoſt like to that of a perſon in health.

On the 6th, ſhe ſeemed every way worſe, continued muttering, moaning, always without ſleep, and paſſed her urine involuntarily. Her pulſe beat 88 ſtrokes in a minute.

She died on the 7th, and her body was opened by Mr. Tickel houſe-ſurgeon, the next day, in preſence of ſome of the pupils and myſelf. Nothing very remarkable was found, except about four ounces of water in the ventricles of the brain, and a larger

quantity than uſual in the *theca vertebrarum*.

I have likewiſe ſeen two caſes lately of the like kind to appearance. Both were women: the firſt about 17, unmarried; the ſecond about 25, married; and both apparently healthy, till they were ſeized with ſymptoms much reſembling thoſe deſcribed by Dr. Huck. Though there was no opportunity of confirming this opinion by diſſection; yet, from the ſimilarity of the ſymptoms, there was juſt ground to conclude, that this diſtemper is not ſolely confined to the age of childhood.

XIV. *Of*

XIV. *Of the Cure of the* Sciatica *.

IT is always the object of my wiſhes, and endeavour, in the duties of my profeſſion, to reduce the cure of diſeaſes to all poſſible ſimplicity: and nothing affords me ſo much ſatisfaction, as when, by repeated cautious trials, a method occurs to me, of curing any diſtemper with ſome degree of certainty, eaſe, and expedition.

I am in hopes, that the method now offered to your conſideration, will be found, by experience, to anſwer the end propoſed, and aſſiſt practitioners in removing an obſtinate painful diſeaſe with leſs difficulty, than by the methods hitherto employed for the purpoſe.

The *morbus iſchiadicus*, or, as it is called in this country, the *ſciatica*, is a diſeaſe too well known by phyſicians to need any de-

* From Medical Obſervations and Inquiries, vol. iv.

ſcription; too painful not to require the ſpeedieſt relief; and ſo obſtinate as to reſiſt many powerful remedies.

In the courſe of my buſineſs, many caſes of this nature have occurred to me, and, during a conſiderable part of my time, whenever they occurred, gave me much uneaſineſs. I found the remedies recommended for the cure of this diſtemper often inſufficient, always ſlow in producing a cure, and very often as painful almoſt as the diſeaſe itſelf.

It is at leaſt amuſing to ourſelves, if not inſtructive to others, to mention by what means we become acquainted with uſeful hints. I was deſired, many years ago, to viſit a man ſomewhat above forty years of age, who had long been confined to his bed, from the effects of a *lumbago* imperfectly cured. The violence of the pain was abated, but he was incapable of moving, or being moved, from the place he was laid, without ſuffering grievous torture. The part affected was the lower part of the *lumbar* region, from

from ſide to ſide, acroſs the loins. His fleſh was much reduced, his appetite decayed, and a feveriſh heat conſtantly attended him, the conſequence of pain and inanition. He had been many weeks under the care of a very able phyſician, who had attended with much diligence, and preſcribed, with judgment, very efficacious medicines. The patient was reduced to the neceſſity of taking opiates to procure a temporary relief. He had taken them a conſiderable time, and in doſes rather more than moderate, though not very large before I ſaw him.

Not finding any reaſon to ſuſpect either an internal abſceſs, or a tendency to it; but that the ſeat of the pain was in the tendinous parts about the loins, and deep ſeated, I directed a ſmall doſe of *calomel* to be given every night.

The following was the preſcription:

℞ *Calom. levig.* 3x.
Tereb. e Chio. q. ſ. f. pil. x. *non deaurandæ. Capiat* j. *omni nocte.*

A laxative mixture was provided, to be taken in the morning, to procure ſtools, if

he ſhould be coſtive. The opiate was gradually omitted.

Finding a grain of *calomel per diem* to have no effect, I ordered him to take two one night, one the next, and ſo to proceed.

His pains rather grew leſs by the time theſe pills were taken; but not the leaſt appearance of any effect from the *calomel* as a mercurial. I increaſed the doſe, till he got up to ſix grains of *calomel* every day, 3 at night and 3 in the morning; without ever perceiving any tendency to a ptyaliſm, purging, remarkable micturition, or diaphoreſis. The pains, however, gradually leſſened; he got up every day, recovered his appetite, got ſtrength, and, in five or ſix weeks time, was able to go abroad. He halted conſiderably, and made uſe of a walking-ſtick; but enjoyed tolerable health, and has not ſince been afflicted with any complaint of this nature.

Six grains of *calomel per diem*, for near a fortnight together, may ſeem a very large doſe

doſe to be taken without producing the common effect of mercurials. It ſurpriſed me at the time; and I ſhould by no means have proceeded to ſuch a length, if experiment, conducted with ſome degree of caution, had not led me ſo far in this particular inſtance.

A gentleman of great eminence in chymiſtry had aſſured me, that he had found very good effects from *calomel* given in the manner above mentioned, with the *Chio turpentine*, in worm-caſes, and all the diſeaſes of children. Thinking that ſmall doſes of *calomel* would be as likely to remove a diſeaſe ſo deeply ſituated ſooner than any other remedy, I had recourſe to this medicine, and gave it in the manner above deſcribed.

On reflecting, however, on its effects, I found cauſe to ſuſpect, that exhibiting *calomel* in the manner I had done, was uſing it in the moſt uncertain method. Moſt kinds of *turpentine*, I believe, are indigeſtible in the human ſtomach; the more ſolid their conſiſtence, the more difficult they are to be

diſſolved in the human body. Great part of the *calomel* might, therefore, be ſo effectually wrapped up in the *Chio turpentine*, the hardeſt and moſt indiſſoluble of the whole claſs that are uſed in medicine, that I apprehend a very ſmall proportion of the *calomel* ever came into action. From this conſideration, I have ſeldom ſince given mercurials made into pills with this ſubſtance, unleſs where I wanted to give the ſmalleſt quantity poſſible; but have generally ordered it to be formed into pills, with ſome ſubſtance that was eaſily diſſolvable; as ſome conſerve or confection. From the ſucceſs attending this caſe, I determined to make trial of a ſimilar proceſs in the *ſciatica*, and the event has generally anſwered my wiſhes. I recollect divers caſes of both ſexes, and different ages, in which a proceſs like the following has been of ſingular ſervice, after various other medicines and operations, recommended for the cure of this complaint, had been uſed to very little purpoſe.

℞ *Calom. levig.* ʒx.
Conſ. Roſ. q. ſ. f. pil. x. *non deaur.*
Capiat j. *omni nocte ſuperbibendo hauſt. ſeq.*

℞ *Aq. Alexit. ſimp.* ℥iſs.
Alexit. ſpir. ʒiiſs.
Vin. Antimon. gut. xxx.
Tinct. Theb. gut. xxv.
Syr. ſimp. ʒj. *m.*

If the pain does not abate by the time this quantity is taken, I increaſe the doſe of *calomel* to two grains one night, one the next, and thus proceed alternately. When the pain abates, the anodyne and antimonial are gradually leſſened; perhaps omitted every other night, or wholly dropped. I have ſeldom met with a genuine *ſciatica* but has yielded to this proceſs in the ſpace of a few weeks, and has as ſeldom returned.

My inducement to make trial of this method at firſt was, that this kind of pains are deep ſeated in the moſt fleſhy parts of the human body, and to which it is extremely difficult to convey the efficacy of any medicine entire, either given internally, or applied without.

That

That mercurials, of all the medicines we are acquainted with, moſt certainly pervade the inmoſt receſſes of the muſcular and tendinous parts, and remove diſeaſes which we know have in them their reſidence.

That, till theſe could take effect, it was neceſſary to mitigate the pain; for all painful diſorders increaſe in proportion to the irritation attending them. The anodyne, above directed, has other properties than that of an opiate merely. Like as in Dover's famous powder, the anodyne in this compoſition, when duly proportioned, reſtrains the antimonial from exerting its uſual efficacy on the ſtomach and firſt paſſages, and conducts it to the remoteſt parts of the circulation, rendering it an uſeful and efficacious medicine in many painful diſorders.

If the diſeaſe does not yield to the doſe above mentioned, I gradually increaſe it till ſome little tenderneſs is perceived in the mouth; but I have ſeldom had occaſion to proceed ſo far, or to ſubject the patient to any

any confinement, unleſs in very rigorous weather. As the violence of the pain may ſafely be mitigated by this kind of anodyne, which is not merely a palliative, I have always thought it better to proceed with the *calomel*, in the manner above mentioned, as an alterative, than to riſk any thing for the chance only of a few days ſpeedier recovery. Formerly I have had recourſe to the bark, *guaiacum*, the *terebinthinate* ſpirits, and other uſual medicines; but ſeldom to the patient's benefit, or my own ſatisfaction. Fontanels, bliſters, cauſtics, likewiſe; but with as little advantage. Of late I have truſted to the proceſs above deſcribed, and have very ſeldom been diſappointed.

Bleeding has not been mentioned, becauſe in moſt of the caſes I have ſeen, it was unneceſſary. Phyſicians are ſeldom conſulted on theſe caſes in the beginning of the diſeaſe. In plethoric habits, this evacuation may be neceſſary as well as purging. Thoſe who ſee the patients early, will be the beſt judges of the neceſſity of theſe evacuations.

XV. *Of*

XV. *Of the Uſe of* Tapping *early in* Dropſies *.

THERE are ſeveral efficacious remedies in the hands of phyſicians, which are often made uſe of ſo late in the diſeaſe, that they fall into diſgrace, from being applied when nothing could ſave the patient from inevitable deſtruction. Of this kind, perhaps, are bliſters applied to the head. The ſick and the by-ſtanders have conſented to this application, when nothing could be of uſe. The patient dies, and the bliſter to the head bears the blame, both as an ill omen from the phyſician, and as a barbarous application, when, in fact, it deſerves the imputation of neither. The phyſician, well knowing the general prejudice againſt the application of bliſters to the head, ſhifts off the propoſal longer than is right in his own judgment, through fear leſt the terror excited by ſuch a preſcription, ſhould do as much harm as the

* From Medical Obſervations and Inquiries, vol. iv.

bliſter

bliſter could do good. As the danger increaſes, this very bliſter is then often called for by the patient's friends, when neither this nor any thing elſe can avail.

With what difficulty can we perſuade thoſe who are on the verge of a conſumption, and the hectic ſymptoms juſt in their infancy, to leave towns for a purer air, or ſeek the aid of Briſtol waters on the ſpot, while ſuch kind of remedies afford almoſt a certain cure! When the lungs are inflamed and ulcerated, an incurable hectic, with all its waſting conſequences, are far advanced; then, whether the phyſician thinks any benefit can be received or not, they fly to Briſtol, when neither the water nor any other means can prevent their diſſolution.

Perhaps the operation of tapping may have undergone the ſame fate. Few dropſical patients can bear the name without apprehenſions of terror; and indeed not without reaſon: for, of the many who undergo this operation, how few are ſurviving inſtances of its advantage!

I think

I think there is reaſon to ſuſpect, that tapping has incurred ſome part of its diſgrace, from its being delayed till it could have no other effect than procuring a very ſhort-lived hope to the patient, at the certain expence of the ſmall ſhare of ſtrength remaining.

I have endeavoured to prevail upon ſuch patients labouring under this diſeaſe as have requeſted my aſſiſtance, to ſubmit to it as early as poſſible, after I found that the quantity of water was ſuch as could not be removed by medicines, without doing great violence to the conſtitution. There are ſeveral perſons now living, whom I prevailed on early to ſubmit to this operation. When I found the uſual diuretics had no effect, and the more active purgatives did as much prejudice by weakening the whole frame, bringing on thirſt, loſs of appetite, debility, and fever, as they did ſervice by the evacuation they produced; I deſiſted from medicine; allowed them to drink as much as thirſt required; and, when the fluctuation was ſo evident as to render the operation ſafe, it was performed. In one caſe, one operation

alone ſucceeded: for, by diuretics and corroborants, proper diet and ſuitable exerciſe, the urine paſſed the kidneys freely, and the patient recovered perfectly. This was an evident *aſcites*, and came on ſoon after a lying-in; apparently from the power of abſorption being weakened beyond a ſpeedy recovery, and the exhalant veſſels being relaxed immoderately; the balance was deſtroyed, and a vaſt quantity of water was collected in a ſhorter time than I ever ſaw. All the *viſcera* ſeemed to be ſound, and none of the uſual cauſes of dropſies from intemperance had preceded. Had we perſevered with ſtrong purgatives or diuretics much longer, the tone of the abſorbent veſſels would perhaps have been ſo far weakened, as to have rendered tapping, or any other means, ineffectual.

Another caſe was, in a ſingle woman of about thirty-five years of age; the diſeaſe ſucceeded a tedious lingering fever, attended with great thirſt; and very large quantities of thin liquors had been poured down, without diſcretion.

Appre-

Apprehending the diſtemper proceeded from the diminiſhed power of the abſorbing veſſels, the redundancy of fluid, the general debility of the whole frame; very few medicines, except cordials, were given, till ſhe was full enough to be tapped. This was happily performed; but ſhe ſoon filled again. The operation was repeated. The medicines ordered for her now began to take effect. The urine was increaſed, her ſtrength returned, and ſhe left the town perfectly recovered.

If we conſider, that this operation is far from being one of the moſt painful, and that, if the fluctuation is ſufficiently evident, and the belly moderately tenſe, it is one of the ſafeſt, it ſeems to me, that we have nothing to fear, either in reſpect to ourſelves or our patients, if we recommend it as early as poſſible.

If I am called to a patient tending to a dropſy, the belly beginning to fill, the urine paſſing in ſmall quantities and high-coloured, the appetite failing, and thirſt increaſing,

creaſing, with the loſs of fleſh in the upper parts of the body; I have recourſe to ſuch diuretics, purgatives, and corroborants intermixed, as the ſtate of the caſe and the nature of its cauſes indicate. The preparations of ſquills, the neutral and alkaline ſalts, the *terebinthinate* balſams, afford many efficacious compoſitions. The purgatives are known to every one. If, by a reaſonable perſeverance in this courſe, no conſiderable benefit accrues; if the *viſcera* do not evidently appear to be obſtructed and unfit for the future purpoſes of life; if the complaints have not been brought on by a long habitual train of intemperance, and from which there ſeems little hope of reclaiming the patient; if the ſtrength and time of life are not altogether againſt us; I deſiſt from medicine, except of the cordial reſtorative kind; and let the diſeaſe proceed till the operation becomes ſafely practicable: when this is done, by the moderate uſe of the warmer diuretics, chalybeates and bitters, alſo the preparations of ſquills in doſes below that point at which the ſtomach would

be affected, I endeavour to prevent them from filling again.

If we recollect what happens in the cure of ſeveral incyſted dropſies, we ſhall find the opinion here advanced confirmed. Divers of theſe are cured by puncture; ſometimes once only; ſometimes the operation is neceſſarily repeated. You will remember many caſes, I doubt not, of the dropſies of the *teſtis* or *tunica vaginalis* particularly. I can recollect ſeveral within my own knowledge; ſome that have required but once tapping, others repeatedly, and yet at laſt have remained perfectly cured.

Should you, gentlemen, be of opinion, that theſe remarks are not ill founded, I have no doubt but, from the ſhare of buſineſs which paſſes through your hands, the public will receive ſuch confirmations as may tend to diſſipate that dread of tapping, which, I am ſatisfied, is one great cauſe of the diſgrace under which it labours, and is alike injurious to our art, and detrimental to the patient.

Before

Before I quit this ſubject, permit me to mention a method of ſcarification that has often ſucceeded in anaſarcous ſwellings of the legs and thighs; at leaſt, it has ſo far ſucceeded, as to draw off large quantities of water, without either ſo much pain or danger as in the common way by inciſions. Theſe are always painful, and, if large, are dangerous, from the known difficulty of healing wounds in anaſarcous habits.

I generally order this operation to be performed with the common ſcarificator uſed in cupping, and the inſtrument to be placed ſo as to make the wounds tranſverſely. If the ſkin is thick, the lancets may be ſet ſo as to make deeper, and conſequently wider inciſions. By this method, a large quantity of water will often drain from the legs and thighs, without riſk of inflammation, or deterring the patient from a repetition, if neceſſary. To proceed with as much ſafety as poſſible, I commonly order the inſtrument firſt to be applied about the middle of the calf on each ſide the leg, and either to one leg only, or to both, as

occaſion requires. The application of glaſſes, either to raiſe the ſkin, or promote the diſcharge afterwards, is unneceſſary. The inſtrument is gently preſſed upon the ſkin till a ſurface is formed ſufficiently flat to admit the lancets in the ſcarificator to take effect equally. By making theſe little openings in the ſkin tranſverſely, they give vent more freely to the fluid, and are longer before they unite.

Should it be aſked, in what caſes this application is proper; it is anſwered, that in all anaſarcous habits, where the *ſeroſa colluvies* gains upon us faſt, and the ſkin is ſo ſtretched as to threaten a rupture, or inflammation and gangrene, much miſchief may be prevented by theſe means. Likewiſe, where the breath is extremely affected in ſuch habits, a temporary relief may, in this manner, often be obtained, in order to give a fair chance to remedies adminiſtered internally. Your own experience, Gentlemen, will ſuggeſt to you many other uſes of this operation.

XVI.

XVI. *Remarks on the Uſe of* Balſams *in the* Cure *of* Conſumptions *.

To the MEDICAL SOCIETY in LONDON.

GENTLEMEN,

SO much has already been ſaid by different Authors on the ſubject of conſumptions, and the hiſtory, progreſs, and uſual methods of treatment, are ſo well known, that it may ſeem almoſt preſumption to offer any remarks to you upon this diſeaſe. And indeed ſome apology may be neceſſary when I acquaint you, that I have no new method of cure to propoſe, nothing, I fear, that will conduce more effectually to the relief of this diſtemper, than the remedies you are already acquainted with. My view in ſubmitting theſe remarks to your conſideration, and if not diſapproved by you to the public, chiefly aims at preventing inconveniences that may ariſe to conſumptive patients by the uſe of ſome medicines vul-

* From the Medical Obſervations and Inquiries, vol. iv.

garly applied to the cure of pulmonary diſeaſes, and which, under certain circumſtances, are not only unſuitable, but frequently injurious.

An idea that all balſams are healing, and that in all ulcers, not excepting thoſe of the lungs, they are indicated, has ſo greatly prevailed, that to doubt of its propriety, would ſeem to betray a want of phyſical knowledge. Yet I cannot but ſuſpect, nay, more than ſuſpect, that this idea has been the means of precipitating too many of theſe unhappy invalids prematurely to their grave.

The term *balſamic*, I own, includes a vaſt variety of different ſubſtances. A ſolution of *ſperma ceti*, nay, ſometimes oil mixed with water, by the means of a mucilage, is ſtiled by ſome a balſamic, as well as a ſolution of balſam of *Peru*, *Copaivi*, *olibanum*, and other heating reſinous bodies: but there is a vaſt difference between theſe. The former, if free from rancidity, are properly emulſions and antacrid. The latter are literally

terally balſamics, all of which are more or leſs pungent and acrimonious. Let us juſt take a view of the principal articles of this kind in the *Materia Medica*, as they are ranged in the *Pharmacopoeia*. They are chiefly the following: *Balſamum Copaiva*,—*Peruvianum*, —*Tolutanum*, —*benzoinum*, —*gummi ammoniacum*,—*myrrha*,—*olibanum*,—*opobalſamum*,—*ſtyrax*,—*terebinthina*. The officinal preparations are, *balſamum Locatelli*,—*ſulphuris*, —*terebinthinae*, —*traumaticum*. Some others I may perhaps have overlooked, but excepting the *guaiacum*, *maſtiche* and *balſamum guaiacicum*, I think I have ſeen, at one time or other, all the reſt made uſe of, and in full doſes, in the cure of conſumptive diſeaſes, where, if it was not evident, there was at leaſt ſtrong reaſon to ſuſpect the lungs were ulcerated.

For the ſenſible qualities of theſe ſubſtances, I ſhall appeal to Dr. Lewis's Hiſtory of the *Materia Medica*, and to the ſubſtances themſelves, and from thence endeavour to point out the effects they are moſt likely to produce on the human body.

Balſamum Copaivæ, ſays Dr. Lewis, has a bitteriſh biting taſte, not very intenſe, but durable in the mouth; and quotes Fuller as aſſerting it to be manifeſtly warm and bitter; and that it purges when taken in a large doſe, *viz.* two or three drachms. This medicine, however, Fuller recommends in dry deep coughs, coughing up of blood and pus.

Balſamum Peruvianum; a very hot pungent taſte: it is one of the hotteſt of the natural balſams.

Balſamum Tolutanum has an agreeable warm ſweetiſh taſte, very ſlightly pungent, and not accompanied, like that of moſt of the other balſams, with any nauſeous reliſh.

Benzoin has very little taſte, impreſſing on the palate only a ſlight ſweetneſs: it imparts by digeſtion to water, a ſlight pungency.

Ammoniacum has a nauſeous ſweetiſh taſte, which is followed by a bitter one.

Myrrha;

Myrrha; a lightly pungent, very bitter taſte; nauſeous on the palate.

Olibanum; a bitteriſh ſomewhat pungent taſte.

Opobalſamum; a bitter, acrid, aſtringent taſte.

Styrax; of a mild taſte, of no great heat or pungency.

Terebinthina Chia; of a warm pungent bitteriſh taſte.—All the turpentines are hot, ſtimulating corroborants or detergents. So far Dr. Lewis.

Balſamum Locatelli is compoſed of oil, two parts; turpentine and wax, each one part: it participates therefore of the qualities of the turpentine increaſed by heat. The red ſanders only give it colour, and ſome little ſmell.

Balſamum ſulphuris is a pungent acrimonious liquor, if made from ſulphur only; but when it is made either with oil of aniſe-

ſeeds

ſeeds or turpentine, the heat and acrimony are much increaſed.

Balſamum traumaticum is a tincture of *benzoin, ſtyrax, balſam* of *Tolu*, and *ſocotorine aloes* in ſpirits of wine. From the nature of the ingredients and the *menſtruum*, it is evidently heating.

An opinion ſeems to have prevailed amongſt mankind univerſally, that theſe kind of gummi-reſinous ſubſtances applied externally, promoted the healing of wounds and ulcers without exception. They early found, that it was neceſſary, in order to heal, to defend the parts affected from the external air; that the juices of plants alone, were inſufficient to form a plaſtic body; that unctuous applications eaſily melted, but that theſe tenacious yet pliant bodies afforded the moſt laſting defence. By degrees they apprehended that each balſam was endued with diſtinct properties. Hence they began to form numerous compoſitions, plaſters, balſams, ointments, without end, which a more enlightened

lightened ſurgery has at length greatly diminiſhed.

Remedies which appeared to aſſiſt in healing wounds externally, were ſoon apprehended to have ſimilar effects internally adminiſtered in diſeaſes proceeding from, or attended with ulcerations, or in wounds of any internal parts: and this apprehenſion ſeems to have introduced theſe and many other ſubſtances ſuppoſed to be poſſeſſed of balſamic qualities, into the train of phthiſical remedies, in all degrees and all conditions of the diſtemper. That this is the fact, I doubt not but you are, from your own obſervations, very fully convinced.

It will be neceſſary to examine with what propriety theſe ideas have been adopted: let us begin with obſerving what effects theſe medicines have when applied externally; trace them cautiouſly in internal application; and then endeavour to judge impartially of their real virtues.

Balſamics

Balſamics and vulneraries are nearly allied, in our conceptions of theſe bodies. Subſtances that warm and ſtimulate the ſolids, and prevent a tendency to putreſcency in the juices. A little heat, ſome ſmall ſtypticity, ſomething agglutinant, muſt all concur. And theſe are moſtly united in the balſams; ſome containing more, ſome leſs, of theſe reſpective properties.

If, in an inflamed ſtate of an ulcer, in a young and vigorous conſtitution, a warm ſtimulating gummy-reſin is applied, pain, heat, inflammation will enſue, fluxion to the pained part will be great, a very conſiderable diſcharge will follow, conſiſting of the juices emitted from the wounded veſſels, and the veſſels themſelves diſſolved by heat and putreſcence. If theſe are exceſſive, the detriment to the ſick will be in proportion to the degree of the diſcharge and the part affected. The ſame medicines applied to a cold, ſerous, phlegmatical habit, in an advanced age, will be juſt ſufficient perhaps to produce ſuch effects as would be deemed perfectly ſalutary; that is, bring on a proper

per digeſtion, the foundation of a perfect cure.

In properly tempering the heat and ſtimulating qualities of balſamic applications, and adjuſting them to the age, habit, and qualities of the patient, conſiſts no ſmall part of the ſkill neceſſary in this part of ſurgery; as I believe will be allowed by the moſt experienced of that faculty.

Suppoſing that theſe remedies have ſimilar effects when internally exhibited, what are phyſicians to expect from medicines endued with theſe properties in ulcerations of the lungs?

If they may be ſuppoſed to paſs the ſtomach, and other offices of digeſtion, unaltered, will they not produce the like effects? Certainly they will. They will ſtimulate; and this, in a great degree, in proportion to their ſenſible qualities: for we know of very few ſubſtances that diſcover much activity on the organs of ſmell and taſte, which do not quicken the pulſe; and whatever quickens the

the pulſe, occaſions a quicker tranſit of the blood through the lungs; and conſequently, the motion of this organ is more frequently reiterated.

If the medicine can be ſuppoſed to have any ſpecific effect on the diſeaſed part, it muſt be to produce the effects already enumerated. If the ſubject is young and vigorous, the diſcharge of fluids, and diſſolution of the ſolids, will be in proportion to the activity and heat of the medicine, and the temperament of the ſufferer.

I am not more averſe to ſpeculative diſquiſitions, which have only for their object the eſtabliſhment of an opinion, than you are. But I perſuade myſelf you will have patience with me in theſe reſearches. It requires perhaps much more abilities than I am maſter of, to eradicate even a trifling error once received: but this I think of ſome magnitude.

It ſeems not improbable, but that an opinion of ſome healing qualities reſident in this

this claſs of medicines, may have been ſtrongly impreſſed on the minds of many perſons who practiſe phyſic, from the injudicious encomiums given of many ſuch kind of drugs and compoſitions, by ſome of the Diſpenſatory writers. Fuller's commendation of the balſam of *Copaivi* in ſuch a tendency to inflammation, as muſt certainly accompany a dry deep cough, or coughing up of blood and pus, muſt undoubtedly have made ſuch impreſſions, and may ſerve as one inſtance, among many others that might be adduced, of the dangerous tendency of indiſcriminate praiſe. I do not produce this inſtance of Fuller's mentioned by Dr. Lewis, as including this gentleman in the cenſure. Dr. Lewis produces it only as Fuller's doctrine, which moſt certainly deſerves reprehenſion, as a medicine ſo pungent and heating cannot be ſuppoſed ſafe, much leſs beneficial, in a diſeaſe that requires a very different treatment.

From an attentive conſideration of the manner in which this claſs of medicines has probably been introduced into the cure of pulmonary

pulmonary diſeaſes, it ſeems to me, that an opinion of their virtues and efficacy in healing external wounds and ulcers, opened a way for their admiſſion internally for ſimilar purpoſes; but how well or ill this opinion is founded, that medicines capable of heating, ſtimulating, quickening the pulſe, are likely to abate heat, and leſſen irritation, upon which the healing of all internal ulcers greatly depends, I think will appear from the preceding remarks.

And if we take a conciſe view of the riſe and progreſs of the *phthiſis pulmonalis*, we ſhall perhaps be more confirmed in our ſentiments, that all medicines poſſeſſed of heating ſtimulating qualities, are in general improper in the treatment of it.

This diſeaſe, for the moſt part, takes its riſe from ſome accidental cold occaſioning a cough. This cough neglected, by its frequency and force, confirmed the inflammatory tendency that firſt ſeized ſome particular point of the lungs. Theſe ſymptoms being neither attended with pain, much fever,

ter, or loſs of appetite or ſtrength at firſt, are ſtill farther neglected, till by their violence, ſome portion of the lungs is ſo far affected, as to become unfit for the uſe of circulation; the inflamed veſſels being either diſſolved into pus, or forming with the juices they contain a *ſcirrhus*, or other immoveable obſtruction.

If this obſtruction is ſmall, perhaps it remains without much increaſe, if proper care is taken, during the patient's life. If it is large, and a conſiderable portion of the lungs is affected, the diſeaſe is every moment increaſed, whether it be inflammation tending to ſuppuration, or to form a ſcirrhous hardneſs, and thereby rendering a portion of the lungs impervious: for as the ſame quantity of blood muſt neceſſarily paſs through the lungs, now a part is obſtructed, as was wont to do in time of health through the whole, it is eaſy to conceive, that the action and reaction of the fluids and ſolids muſt be increaſed more than conſiſts with the ſafety of this organ; and this in propor-

tion to the extent and ſituation of the part affected.

And hence in part proceed thoſe flufhings in the cheeks, that heat in the palms of the hands, or feet, or both, which are generally perceptible in conſumptive perſons, in the early periods of this diſtemper; and which accompany them throughout, only as they ſeem at length obliterated by more grievous ſufferings.

I omit to take notice of the many other cauſes that produce conſumptions: for when once a ſingle point of the lungs is obſtructed, or the ſmalleſt ulcer formed, the diſeaſe becomes alike formidable, the age and habit of the patient, and the degree of inflammation or ulceration being the ſame, whatever may be the cauſe.

If then, from the firſt beginning of this diſeaſe to its concluſion, the *momentum* of the blood in the lungs becomes greater in proportion to the obſtruction, and that the effect of this increaſed *momentum* is an increaſe

creaſe of the obſtruction; and as the medicines above mentioned have a tendency, ſome more ſome leſs, according to their different degrees of activity, to increaſe this *momentum*, ought we not to be extremely diffident in applying them in ſuch caſes, by whatever authority they are recommended?

Perhaps it will be alleged, that balſams, in certain ſtages of this diſeaſe, eſpecially where there is a manifeſt ulceration, and great quantities of pus are formed, muſt be of uſe as antiſeptics. I will not deny but they may be poſſeſſed of this property, as moſt heating aromatics and bitters ſeem to be. But ſuppoſing the whole of this antiſeptic efficacy could be conveyed unimpaired to the part affected through all the changes they are liable to in the courſe of digeſtion, ſtill they would be active ſtimulants; and, whatever effect they might have on the juices, would ſtimulate the ſolids to more frequent and injurious contractions.

It is moſt probable, however, that much of this heating quality is expended before it reaches the part affected; whilſt it is evident, that moſt, if not all the ſtimulating tribe of medicines, whatever effect they produce on certain parts, as the *cantharides* on the urinary paſſages; yet exert a part of their active qualities on the nerves near which they paſs, ſo as in ſome degree to accelerate the motion of the blood.

Should it be farther alleged, that reaſoning is in vain where many facts, much authority, and general uſage is againſt me, I admit the full force of this allegation; allow that many facts as ſtrong as Fuller's may perhaps be produced. But as I well know the difficulty of aſcertaining the effect of any medicine by juſt experiments, I cannot but doubt at leaſt of the inferences, when my own ſenſes and diſpaſſionate reaſoning are againſt them. I am not unacquainted with the influence of general prejudice, nor with the difficulties that oppoſe themſelves to us, in endeavouring to ſurmount them. Early prepoſſeſſions confirmed by general con-

conformity of opinion, in favour of balſams, cannot ſoon be changed or eradicated.

All that I hope for from this eſſay, is, to put young practitioners upon their guard in reſpect to theſe kind of medicines in the treatment of conſumptions. I think I have ſeen much detriment ariſing from them, and very ſeldom any benefit. I believe the practice was firſt adopted on miſtaken principles, and followed too generally without conſideration. And it ſeems not improbable, but the ancient practice of embalming, which is ſuppoſed to have been principally performed by the means of balſams, may have contributed not a little towards eſtabliſhing a general prepoſſeſſion in their favours; and that many might infer from their efficacy in preſerving dead bodies, they were endued with properties capable of preventing the corruption or decay of the living.

XVII. *Remarks on the* Cure *of* Conſumptions *.

To the MEDICAL SOCIETY in LONDON.

GENTLEMEN,

IN a former paper, I ſuggeſted ſome doubts I had entertained reſpecting the uſe of balſamic medicines, ſtrictly ſo called, in the cure of conſumptions, and offered ſome conjectures in regard to their firſt introduction into internal uſe, and their application to pulmonary diſeaſes in particular. Upon the whole, I am ſtill of opinion, that their uſeful efficacy in theſe diſorders is much to be ſuſpected, and that an indiſcriminate uſe of medicaments of this claſs, has rather a tendency to increaſe than mitigate the ſymptoms attending a genuine *phthiſis pulmonalis*.

Whilſt I am endeavouring to excite ſuſpicions againſt what appear to me the *lac-*

* From the Medical Obſervations and Inquiries, vol. iv.

dentia in this diſtemper, I ſhould think myſelf fortunate, could the review of ſeveral years experience afford any uſeful hints to thoſe whom I wiſh to aid, and to whom theſe remarks are particularly addreſſed, the young practitioners.

When we conſider the ſtructure of the lungs, the tenderneſs of their fabric, the multitude of veſſels of which they conſiſt, the importance of their uſe, the many accidents they are unavoidably expoſed to, and, in compariſon of many other parts, their inſenſibility to immediate leſion, we ſhall be much more ſurpriſed there are ſo few perſons die of conſumptions, great as the number may ſeemingly appear *, than that ſo many periſh by this diſtemper.

To enumerate all the cauſes that are capable of producing a *phthiſis pulmonalis*, is

* In this city the weekly bills are ſuppoſed to exhibit a tolerably exact account of thoſe who die of the reſpective diſeaſes mentioned in that liſt. But I am informed, that the article of Conſumptions includes generally all thoſe who die of any lingering diſeaſe, and are much emaciated; by which the liſt is vaſtly enlarged beyond what it ought to be, to the reproach of our country; foreigners imagining that this diſeaſe is much more frequent amongſt us, than it is in reality.

not my intention; but to point out the neceſſity of attending to its commencement, in order to prevent its progreſs. The meaſles, and other inflammatory diſeaſes of the breaſt, to which children, as well as others, are expoſed, often lay the foundation of conſumptions: ſo likewiſe will colds, the ſuppreſſion of ſome ſalutary diſcharge, ſcrophulous and venereal affections, and many other cauſes, all which will operate more certainly and ſpeedily in bringing the diſtemper to a fatal concluſion, in proportion as a certain tenderneſs in the fabric of the lungs, an hereditary *tabes*, and other circumſtances, concur: for, to thoſe who are acquainted with the animal oeconomy, it is rather a matter of wonder how the ſtrong and robuſt eſcape affections of the lungs, ſurrounded as we are with ſo many cauſes capable of producing theſe affections, than that perſons of a certain make, and particular delicacy of conſtitution, are ſo ſubject to pulmonary diſeaſes.

We cannot, I think, be too induſtrious in propagating the following doctrine: That the time at which a phyſician can be of

of moſt uſe in the cure of conſumptions, is at their firſt beginning. The ſlighteſt catarrhal defluction ought not to be neglected, if it does not go off in a few days.

The beginning of moſt conſumptions is a cough, more or leſs violent. This cough is produced either by a thin ſaltiſh defluction, irritating the membrane that lines the *trachea*, ſo as to bring on a general ſpaſm of all the parts, in order to diſlodge and diſcharge the irritating matter; or elſe, by an inflammation of ſome part of the lungs or *bronchiæ*, produced by one or other of the general cauſes of inflammation.

If the catarrhal cough is neglected, or is repeatedly increaſed by the cauſes that firſt produced it, this will be ſufficient to bring on an inflammation, which, if not removed, terminates in the uſual manner of inflammations; either by reſolution, in which caſe the lungs receive but little harm; or by ſuppuration, in which the miſchief, however ſmall at preſent, does not fail to be productive of laſting and injurious conſequences;

pro-

proportioned to the extent of the injury, and the condition of the ſufferer, in reſpect to prediſponent cauſes.

If the inflammation terminates neither by reſolution nor ſuppuration, it often leaves a ſcirrhous hardneſs, whereby this particular part of the lungs, however ſmall and confined, becomes of little or no uſe in the œconomy of this organ; but by occaſioning an obſtruction of circulation and reſpiration in one ſingle point, ſubjects the ſound parts of the lungs to greater labour, as was before obſerved *.

From hence it is at leaſt evident, that the utmoſt care ſhould be taken at the commencement of this diſeaſe. The moſt trifling cough, if it continues, may either advance gradually till it ends in immediate miſchief, or may leave ſuch impreſſions as may ſubject the patient to perpetual returns: a cough therefore in children, or young perſons, or in perſons of a certain make at any time of life, ought ſpeedily to be cured.

* See a former paper on this ſubject.

Perhaps

Perhaps it will be needleſs to ſuggeſt the means of doing this moſt ſafely: but there is one part of management neceſſary to be obſerved by thoſe who are about children thus affected, that cannot be too ſtrongly inſiſted on by the phyſician, and that is, the neceſſity of proper diet, proper likewiſe in reſpect to quantity. If ever an extreme attention to regimen is neceſſary, it moſt certainly is ſo to perſons affected with coughs, as will perhaps be more fully mentioned; but to children it is ſtill more ſo, both as they are greater ſufferers by improper diet, and have leſs command over their own appetite and inclinations.

For if a large quantity of the beſt chyle adds ſpeedily to the preſent ſtock of blood, as all muſt paſs through the lungs, this temporary increaſe of quantity will add to their irritation, the quantity itſelf being a *ſtimulus*. But if the chyle thus increaſed has not been properly digeſted, either on account of the quantity or kind of food, the miſchief will be greater. And this poſition will, I believe, be found uniformly true through

through every ſtage of pulmonary diſeaſes, and will evince the neceſſity of giving very explicit and peremptory orders in relation to diet, and the duty of thoſe who attend the ſick in this diſtemper.

I know, Gentlemen, that you, as well as myſelf, often have occaſion to look back at the fatal neglect, committed both by the ſick themſelves, as well as thoſe who ought to have had their future health more at heart. With what eaſe would many of the moſt incurable conſumptive caſes have been prevented, or cured, at their firſt commencement? A perſon whoſe emaciated figure ſtrikes one with horror, his forehead covered with drops of ſweat, his cheeks painted with a livid crimſon, his eyes ſunk, all the little fat that raiſed them in their orbits, and every where elſe, being waſted; his pulſe quick and tremulous, his nails bending over the ends of his fingers, and the palms of his hands as dry as they are painfully hot to the touch; his breath offenſive, quick, and laborious; his cough inceſſant, ſcarce allowing him time to tell us, that

ſome

ſome months ago he got a cold, but he knew, perhaps, how he got it; he neglected it for this very reaſon, and neglected every means of aſſiſtance, till the miſchief was become incurable, and ſcarcely a hope left of palliation. You ſee multitudes of ſuch objects daily, and ſee them with a mixture of anger and compaſſion for their neglect and their ſufferings. Excuſe me for treſpaſſing in this manner on your time and your humanity. Though it is not in your power to prevent all theſe ſacrifices to ignorance and inattention; yet, if the faculty combine in prompting their fellow-citizens to neceſſary care, and prompt them to ſuffer no ſlight beginnings to paſs unregarded, however they may be acting againſt their own intereſt, they will have the ſatisfaction of contributing to the preſervation of many a uſeful life; for, perhaps, among thoſe who periſh by conſumptions, there are many who, in reſpect to the excellencies both of body and mind, have given indications of becoming conſpicuous ornaments of humanity.

When

When a cough begins, if the patient is very young, let the quantity of diet, eſpecially ſolids, be leſſened; let the deficiency be made up with warm thin ſuppings. Barley-water, milk and water, thin gruel, the lighteſt broths, ſuch things of this kind as the age and condition of the patient admit.

If there be much heat, or any pain in the breaſt, bleeding will be indiſpenſably neceſſary. The quantity to be taken away, and how often repeated, muſt be determined by the ſymptoms, the patient's age, habit, pulſe, and other circumſtances.

In reſpect to medicines, the moſt demulcent and cooling are indicated; and when the ſymptoms of inflammation are abated, gentle anodynes will be uſeful. Every thing of a heating, irritating nature, ſuch as the balſams, ſhould be avoided; and even the expreſſed oils of almonds and olives are often to be ſuſpected, and uſed with caution, as they are ſeldom totally free from ſome degree of rancidity, than which ſcarcely any thing is more irritating and diſguſtful. I have known

known the common doſes of *nitre*, the ſaline mixture, and other cooling ſalts, increaſe a cough by irritation; ſo that even theſe ſhould be adminiſtered, when neceſſary, rather in ſmall doſes, and frequently. The common emulſion made with good freſh ſweet almonds, is a very proper vehicle for the ſeveral remedies indicated in this complaint; but if the almonds are not freſh, or are intermixed with the bitter, as is too frequently the caſe, they are injurious.

Freſh white poppy ſeeds, in the proportion of half an ounce to a pint of Briſtol or pure water, make an excellent emulſion and unexceptionable; and theſe may be raiſed in any quantity both at home and in our own colonies.

If the thin copious defluction leſſens, and the liquid grows thicker, and yet comes up without difficulty, the cough will abate, and gradually ceaſe entirely. It muſt depend upon the judgement of the preſcriber to know when and to what extent anodynes are to be uſed. I believe they are never ſafe at the

the beginning of a cough, till by proper methods the tendency to inflammation is firſt abated, except where the cough is altogether of the ſpaſmodic kind, as in ſome hyſteric caſes, or when it proceeds from acrimony heretofore diſcharged by an iſſue, an ulcer, or eroſions on the ſkin, and imprudently ſuppreſſed; or from gouty affections; in which caſes anodynes are undoubtedly of uſe: but in coughs ariſing from ſuppreſſed perſpiration, or an inflammatory diatheſis, as in the meaſles and epidemic conſtitutions, in ſuch caſes, anodynes are ſeldom to be allowed, unleſs it be to obtain a truce from temporary violence.

The miſchiefs that have proceeded from *Godfrey*'s cordial, *Bateman*'s drops, *Squire*'s elixir, and other heating anodynes in the hands of ignorance, are ſcarcely to be enumerated.

When by a proper cooling regimen, and evacuations, the inflammation accompanying the cough is abated, then ſmall doſes of anodynes joined with the medicines above

above mentioned, to ſuch a quantity as to mitigate a fruitleſs, inceſſant cough, are very beneficial. If this firſt period has paſſed over without any attention paid to the diſorder, the cough becomes more harſh and dry; ſlight lancinating pains are now and then felt, darting, as it were, through the ſubſtance of the lungs, from ſome central point in the cavity of the *thorax*; commonly from under one of the breaſts, ſometimes exactly in the middle. A ſoreneſs is complained of that is almoſt continually felt: this is augmented much by the cough, but not to ſuch a degree as the pleuretic ſtitches. It is not unuſual under theſe circumſtances to ſee the thin frothy phlegm which is diſcharged by coughing, ſtreaked with blood; ſometimes a ſmall ſpoonful, or two or more, are coughed up at ſome certain time of the day. It is not often that much larger quantities are thrown up in this ſtate of the diſeaſe, unleſs the patient is very plethorick, or the fabric of the lungs extremely tender, or the cough is inceſſant.

The ſame indications point out a ſimilar proceſs, in reſpect to cure. To withdraw as much nouriſhment as can be done without the riſk of ſuffering from inanition; to ſupply the moſt cooling nouriſhment, and the moſt eaſily digeſted, in moderate quantities, and the more frequently; to bleed in ſmall quantities repeatedly; judging of this neceſſity not from the appearance of the blood alone, for this will often continue ſizy, till more is taken away than is compatible with the patient's ſituation in other reſpects. For if we leſſen the *vires vitæ* by inanition too much, a diſeaſe then takes place, which probably will increaſe our difficulty, that is debility of the ſolids, and the conſequent vitiation of the fluids. The pulſe, the heat, the pain, cough, reſpiration, ſtrength and age of the patient ſhould all be taken into conſideration. Many perſons live free from complaints with ſizy blood. The condition therefore of the blood ſingly ought not to determine us; we ſhould examine all the evidence.

It

It ſeems unneceſſary to ſpecify what I mean by light cooling nouriſhment: it may not however be improper to obſerve that wine, or any other fermented ſpirituous liquors, are improper alone, and malt liquor, however weak, ſeems very generally injurious; fleſh-meat, or indeed animal food of any kind, ſeems under theſe circumſtances improper. Spices of all kinds in any quantity, and indeed every thing poſſeſſed of much piquancy. Whey, either from goats or cows, milk, butter-milk, milk and water, light broths, and all the farinaceous preparations are to be recommended, but ſtill remembering to adviſe caution in reſpect to quantity. For if a larger quantity of the beſt adapted nutriment is taken in at once than can be well digeſted, the chyle, ſo far from affording that bland and balmy fluid to the blood, that muſt qualify it for the offices of nutrition, communicates a ſharpneſs that defeats our expectations. It matters very little, both in this and many other diſeaſes, what quality the food is of, if the quantity likewiſe does not correſpond to the powers of digeſtion. I have not the leaſt

doubt but this is likewiſe your opinion; and that you inforce it in your directions: but that this is the caſe with practitioners in general, may perhaps not be ſo certain.

Under ſuch a ſituation as is above deſcribed, the methods pointed out ſeldom fail to abate the fever and pain, lower the pulſe, and eaſe reſpiration; the diſcharge then becomes thicker, and the cough, inſtead of being violent and continual, juſt comes on when a quantity of well digeſted phlegm ſolicits its diſcharge, and ſtep by ſtep uſual health returns.

To ſuch convaleſcents, one cannot but recommend the utmoſt diſcretion in reſpect to their conduct. A violent cold, a debauch, long confinement in populous cities, and other ſimilar cauſes, will ſoon bring back the ſame ſymptoms, which, if frequently repeated or neglected, bring on a more formidable diſtemper, from which if the patient recovers, he will have much to attribute to the ability of his phyſician.

In

In the farther progreſs of this diſtemper medicines of a different claſs are found of advantage: the bark, elixir of vitriol, *Briſtol* and other waters, a total abſtinence from animal food, and other methods of treating conſumptive diſeaſes, have their uſes. Should you think theſe remarks not unworthy of your notice, I ſhall endeavour to collect ſuch farther remarks as have occurred to me on this ſubject, and ſubmit them to your conſideration.

I am, &c.

XVIII. *Some Account of the* Cortex Winteranus, *or* Magellanicus, *by* John Fothergill, *M. D. F. R. S. with a botanical Deſcription by Dr.* Solander, *F. R. S. and ſome Experiments by* M. Morris, *M. D. F. R. S.**

To the Medical Society in London.

Gentlemen,

THOUGH the improvement of the art of healing is your immediate object, yet I do not perceive from the plan of your inſtitution, that you propoſe altogether to exclude ſuch parts of natural hiſtory as relate to the Materia Medica, and which may tend to explain what has hitherto been obſcure, and thereby created confuſion. Preſuming therefore that the following account of an article well known by name, and by this chiefly, may be conformable to your intentions, I ſubmit it to your conſideration without any further apology.

* From the Medical Obſervations and Inquiries, vol. v.

When

When the Dolphin, Captain Wallis, returned from the South Seas in 1768, the officers brought with them a conſiderable quantity of the genuine bark, called Winter's Bark. I call it the genuine bark, to diſtinguiſh it from the *Canella Alba*, which has long uſurped the name of Winter's Bark, though it is very unlike in its appearance and ſenſible qualities, the produce of a different tree, and which is brought from a very different part of the globe.

Captain Wallis ſoon after his return gave a ſmall branch of the tree to his friend, Captain Middleton, who was ſo obliging as to make me a preſent of it. Some of the bark I had received before from an officer of the Dolphin. Theſe circumſtances induced me to wiſh ſome ſuch account of this bark might be laid before the public, as is here propoſed to you, that the true *Cortex Winteranus* of the Magellanick Streights might for the future be clearly diſtinguiſhed from the *Canella Alba*, the produce of Jamaica and ſome other Weſt-India iſlands.

The ſpecimen I had received was ſo far perfect, that it enabled the late very eminent draughtſman G. D. Ehret to make an elegant drawing of it, with a tolerably exact deſcription of its botanical characters.

But as I wiſhed to lay before you the cleareſt account I could collect of this ſubject, I prevailed upon Dr. Solander to examine the ſpecimen, deſcription, and the drawing I had procured, and to favour me with ſuch a hiſtory and deſcription of it as might enable botaniſts to place the tree in its proper rank. At the ſame time I requeſted Dr. Morris to lend his aſſiſtance in a chemical analyſis of this ſubſtance.

The following is the botanical hiſtory and deſcription of the *Winterana Aromatica*, by Dr. Solander:

The tree which produces the Winter's Bark was utterly unknown to the Europeans till the return of Captain John Winter, who, in the year 1577, ſailed with Sir Francis Drake, as commander of a ſhip called the Elizabeth,

Elizabeth, deſtined for the South Seas; but immediately after they had got through the Streights of Magellan, Captain Winter, on the 8th of October 1578, was obliged by ſtreſs of weather to part company, and to go back again into the Streights, from whence he returned into England in June 1579, and brought with him ſeveral pieces of this aromatic bark, which *Cluſius*, in his *Exot.* p. 75, calls after him *Cortex Winteranus*, or Winter's bark.

Several authors have mentioned it ſince in their botanical works; but all they have ſaid has been copied from Cluſius, e. g. Dalechamp Hiſt. p. 1818. Parkinſon Theatr. p. 1652. *Bauhin Pin.* 461. *Jonſton Dendr.* p. 232.

No more was heard of this bark * till the Dutch fleet under Admiral Van Nort returned

* In the account of Amada's and Barlow's diſcovery of Virginia, 1584, it is ſaid that they found there "*Black Cinnamon*, of which Mr. Winter brought from the Streights of Magellan." *See Hackluyt Voy. vol.* 3. *p.* 246, which is the bark of a very different tree. *Pomet*, in his *Mat. Med. p.* 130, imagined our Winter's Bark to be the ſame with the *Canella Cinna-*

turned from the Streights of Magellan, in the year 1600; the author of their voyage calls this tree "Lauro ſimilis arbor licet "procerior, cortice piperis modo acri et "mordenti." *De Bry. Ind. Occid. vol.* 9, *p.* 18.

Afterwards all the navigators who paſſed through the Streights of Magellan took notice of the tree, on account of the uſefulneſs of its bark; but none furniſhed any deſcription that could make it botanically known, before Mr. George Handaſyd came from the Streights of Magellan, 1691, and brought with him ſome dried ſpecimens, which he gave to Sir Hans Sloane, and are now preſerved in the Britiſh Muſeum, Hort. Sicc. 8. fo. 100. 130. 148. 332. fo. 46. From theſe ſpecimens, and the account Mr. Handaſyd gave of this tree, Sir Hans Sloane drew up a hiſtory, and gave a figure in the

Cinnamomea, Brown Hiſt. Jam. p 275, *fo.* 3. *Cateſby Carol. vol.* 2. *p.* 50, 150, which grows in the Weſt-Indies, between the tropics, and is called by the druggiſts *Canella Alba.* This error has been followed by moſt of the modern writers, and the two trees propoſed under the ſame manner, viz. *Wintera-nia Canella. Linn. Sp. Pl.* 638.

Philo-

Philoſophical Tranſactions, 1693, No. 204, p. 922, t. 1. "Periclymenum rectum, "foliis laurinis, cortice acri aromatico."

Still the ſyſtematical botaniſts could not give it a place in their catalogues, being unacquainted with its flowers and fruit.

The following deſcription and annexed figures, which are taken from the ſpecimens brought by Captain Wallis from the Streights of Magellan, and the obſervations made by us *, during our ſtay in Terra del Fuego, in the Streights le Maire, I hope will ſatisfy the curious, and enable botaniſts to refer it to the proper claſſes of their ſyſtems. It ſeems as if the trees in the Streights of Magellan, near the ſea coaſt, were ſtinted, perhaps from the high winds, and have ſmaller leaves than thoſe upon Terra del Fuego, where again the flowers were not ſo much expanded as in the Streights of Magellan. This laſt difference may be occaſioned by the ſeaſon, as the flowers on Terra del Fuego were ſeen in the month of January,

* Joſeph Banks, Eſq. and Dr. Solander.

and in the Streights of Magellan in the month of March.

The Winter's Bark-tree, Winterana Aromatica, is one of the largeſt foreſt trees upon Terra del Fuego; it often riſes to the height of fifty feet. Its outward bark is on the trunk grey and very little wrinkled, on the branches quite ſmooth and green.

The *branches* do not ſpread horizontally, but bend upwards, and form an elegant head of an oval ſhape.

The leaves come out, without order, of an oval elliptic ſhape, quite entire, obtuſe, flat, ſmooth, ſhining, of a thick, leathery ſubſtance, evergreen, on the upper ſide of a lively deep green colour, and of a pale bluiſh colour underneath, without any nerves, and their veins ſcarcely viſible; they are ſomewhat narrower near the foot-ſtalks, and there their margins are bent downwards.

In general, the leaves are from three to four inches long, and between one and two

broad; they have very ſhort *footſtalks*, ſeldom half an inch long, which are ſmooth, concave on the upper ſide, and convex underneath. From the ſcars of the old footſtalks the branches are often tuberculated.

The peduncles, or footſtalks for the flowers, come out of the *axillae foliorum*, near the extremity of the branches; they are flat, of a pale colour, twice or three times ſhorter than the leaves; now and then they ſupport only one flower, but are oftener near the top divided into three ſhort branches, each with one flower.

The *bracteae* are oblong, pointed, concave, entire, thick, whitiſh, and ſituated one at the baſis of each peduncle.

Calix, or *flower-cup*, it has none; but in its place the flower is ſurrounded with a *ſpathaceous* gem, of a thick, leathery ſubſtance, green, but reddiſh on the ſide which has faced the ſun: before this gem burſts, it is of a round form, and its ſize is that of a ſmall pea. It burſts commonly ſo that one

ſide

ſide is higher than the other, and the ſegments are pointed.

The *corolla* conſiſts always of ſeven petals, which are oval, obtuſe, concave, erect, white, have ſmall veins, and are of an unequal ſize, the largeſt ſcarcely four lines long; they very ſoon fade, and drop off almoſt as ſoon as the gem burſts.

The filaments are from fifteen to thirty, and are placed on the flat end ſide of the receptacle; they are much ſhorter than the petals, and gradually decreaſe in length towards the ſides.

The *antherae* are large, oval, longitudinally divided into two, or as if each was made up of two oblong *antheras*.

The germina are from three to ſix, placed above the receptacle, turbinated, or of the ſhape of an inverted fig, flat on the inſide, and ſomewhat higher than the ſtamina; they have no ſtyles, but terminate in a ſtigma,


b
a
2
1
Fig. 1.
b
a
4
3
b
a
5
a
b
7
6
b
a
9
10
11
12
8
Jn.o Lodge sculp.

ma, which is divided into two or three ſmall lobes.

The fruit I have never ſeen in its perfect ripe ſtate, but can conclude from the unripe ones, which I ſaw in abundance, that each germen becomes a ſeparate ſeed-veſſel, of a thick, fleſhy ſubſtance, and unilocular: in each I could plainly diſcern the rudiments of three, four, or five ſeeds.

EXPLANATION of the FIGURES.

Obſ. All but Fig. 1. are magnified.

Fig. 1. The ſpathaceous gem, after it is burſt open.

2. The ſame.

3. The ſame (*a*) with the corolla (*b*) remaining within it.

4. One of the petals ſpread out.

5. The ſtamina (*a*) and the piſtilla (*b*) after the gem and the corolla are taken away.

6. The

6. The outſide of an anthera (*a*) with its filament (*b*).

7. The inſide of the ſame.

8. The germina (*a*) ſituated on the center of the receptacle, after the ſtamina have been removed; the lobated ſtigma (*b*).

9. The convex, or outermoſt ſide of a germen (*a*) with its ſtigma (*b*).

10. The inſide of the ſame.

11. A germen cut open longitudinally, ſo as to ſhew the rudiments of the ſeeds.

12. A germen cut through tranſverſely.

To this very accurate hiſtory and ſyſtematical deſcription by Dr. Solander, I take the liberty to ſubjoin an extract of a letter from Captain Wallis, relative to this ſubject, as it contains ſome particulars not unworthy of being preſerved in this account.

"I met,

"I met (ſays Captain Wallis) with the Winter's bark at Port Famine, in the Streights of Magellan, in lat. 53. 30. ſouth, and 70. 00. weſt longitude from London. The country is as mountainous as the Alps, and of courſe the tops of them ever covered with ſnow.

"The firſt trees we met with was on Chriſtmas-day, 1766, which is midſummer in that country. The tree had no bloſſom, nor appearance of any at that time. We continued at this place about a fortnight, to wood and water, during which time the ſurgeon, with the aſſiſtance of the ailing people, gathered a pretty large quantity of the bark.

"The trees were of various ſizes, according to the ſoil they grew upon, and their ſituation. Thoſe near the ſea, and in rocky ground, were ſcrubby, the bark ſticking cloſe to the wood, and had a dirty look; thoſe on plain ground and ſheltered were ſtraight and tall, riſing to thirty or forty feet, and as thick as a middle-ſized man. The

bark ſmooth, and ſomewhat reſembling the horſe-cheſnut. The trees are exceedingly beautiful; and there were abundance of young ones growing under them, from an inch to ten feet high. I put a great number of theſe ſmall ones into boxes of earth, and ſent them by a ſtore-ſhip to Falkland's Iſlands, where I heard they were planted, but did not live, owing I believe to want of care.

" The leaves of this tree are like thoſe of laurel; its wood is white, light, and neither fit for burning or any other uſe. The wood is inſipid; the taſte is only in the bark and leaves.

" At every place we touched at from Port Famine till we had reached the weſtern end of the Streights, a courſe of about 120 leagues, we met with the tree that produced this bark. The weather is much more ſevere in this climate than in England, where, in my opinion, they would thrive very well. We arrived in March at a part of the Streights called Upright Bay, where we were detained a month.

a month. The trees here were very ſcrubby, but we found them in bloſſom, as I ſuppoſe they were now alſo at the eaſternmoſt part of the Streights, though we had much ſnow and hard froſts. The flowers were dropped from many of the trees, and the buds or berries were ripening. At that time they were not larger than a pea: I brought many of them home, and gave them to ſeveral of my acquaintance, who ſowed them; but I never heard any of them came up."

Thus far Captain Wallis.

The bark of the Winterania, or Winter's cinnamon, brought over by the Dolphin, in reſpect to figure, exactly reſembles that which was delineated by Cluſius. The pieces are about three or four inches ſquare, of different degrees of thickneſs, from a quarter to three quarters of an inch. It is of a dark brown cinnamon colour, an aromatic ſmell if rubbed, and of a pungent, hot, ſpicy taſte, which is laſting on the palate, though imparted ſlowly. It has the name of Winter's cinnamon, from a faint reſemblance in colour and flavour to that grate-

ful aromatic, though differing from it greatly in every other reſpect. This bark is only brought to us from the Streights of Magellan, and is the produce of the tree above deſcribed; much celebrated as an antiſcorbutic by the firſt diſcoverers, but unknown in the practice of phyſic, no quantity, except as a curioſity, having been brought to Europe till the return of the ſhips ſent out on the expeditions to the South Seas.

The bark which was ſubſtituted in the room of this, is the *Canella Alba* of the ſhops, the bark of a very different tree, and brought from a different part of the world, diſagreeing with the former in almoſt every particular. It is of a light aſh or grey colour; in thickneſs it ſeldom exceeds two-eighths of an inch. The pieces are of different lengths and irregular ſhapes, and for the moſt part are taken from trees of ſmall ſize: its taſte is aromatic, and has more of the clove than the cinnamon. It yields an eſſential oil by diſtillation, and is brought to us chiefly from Jamaica, though it is found I believe in ſome other of the Weſt-India iſlands.

iſlands. There are a few plants of it in the ſtoves of ſome curious botaniſts in England, particularly in that belonging to John Blackburne, Eſq; at Orford, Lancaſhire.

Sir Hans Sloane gives a figure of it in his Hiſtory of Jamaica, from which it evidently appears to be a different genus from the Winterania Aromatica.

For want of the knowledge of theſe circumſtances, and an opportunity of comparing the genuine Winter's bark with the *Canella Alba*, ſome of the moſt reſpectable writers on the Materia Medica have ſcarcely been able to avoid confuſion in treating this ſubject, which it is hoped for the future will be avoided, and the diſtinction between them ſufficiently eſtabliſhed.

Experiments on the Cortex Winteranus *or* Magellanicus, *by Dr.* Morris.

1. FIVE grains of Cortex Winteranus in coarſe powder were infuſed in two ounces of cold water for about an hour;

on adding to a part of the filtered ſolution gradually ten drops of a ſaturated ſolution of green vitriol, the liquor became of a bluiſh black, and a black ſediment was precipitated.

2. On repeating the experiment with hot water inſtead of cold, five drops of the ſolution of vitriol ſtruck a purpliſh black with the infuſion; the ſediment was next morning of a dark olive colour, not unlike the ſediment from an infuſion of the Peruvian bark with *Sal Martis*.

3. On a comparative trial with the infuſion of galls, though the phaenomena were the ſame with ſolution of vitriol, yet on examining the ſediment of each next day, that of the infuſion of galls was blacker, lighter, and more copious than that of the Winter's bark.

Two ounces of Winter's bark coarſely powdered were infuſed in a pound of clear river-water for thirty-ſix hours; the infuſion was filtered, half a pound of water was added

added to the reſiduum, and infuſed with it for the ſame ſpace of time; being then filtered, it was mixed with the former infuſion, and evaporated to a dry extract, which weighed two drachms and twenty-four grains.

On treating two ounces of this bark with the ſame quantity of proof ſpirit, two drachms and twelve grains of dry extract were obtained.

On proceeding in the ſame manner with rectified ſpirit of wine, two drachms only of extract were produced.

A pound of the ſaid bark in coarſe powder was infuſed in a proper quantity of water for twenty-four hours, and a gallon was carefully drawn off by diſtillation. The diſtilled water was clear, of a pleaſant taſte, and had ſomething of the flavour of cinnamon. There was no eſſential oil.

The decoction evaporated afforded ſix ounces of a ſoft extract, of a grateful aromatic taſte.

From theſe experiments the Cortex Magellanicus appears to be an aſtringent of a particular kind, and therefore likely to be of uſe in ſeveral manufactures. That water is the proper diſſolvent of this bark, though the ſaline, gummy, and reſinous parts are ſo blended in it as in ſaffron and ſome other vegetables, that it parts with them readily in proof and rectified ſpirits of wine, though not in ſo great a quantity.

The infuſion and decoction of this bark were of ſo grateful an aromatic bitter taſte, that it ſeems likely to be a pleaſant vehicle for ſome of the nauſeous drugs. With this view, on ſubſtituting the powder of this bark for the cardamom ſeeds in making the infuſion of ſenna, as directed in the London Diſpenſatory, the nauſeous ſmell and taſte of that excellent purgative was ſo effectually covered, as to be ſcarcely diſtinguiſhed by the niceſt palate. Tincture

ture of rhubarb alſo prepared with this bark inſtead of cardamoms ſeemed far leſs diſagreeable.

It muſt not be concealed, that the *Canella Alba* from Jamaica, which is generally ſold for the Winter's bark in the ſhops, was found to have the laſt-mentioned property, but I think not in ſo high a degree.

M. MORRIS.

I ſhall conclude this account expreſſing a wiſh, that this very elegant and not leſs uſeful tree might ſpeedily be made a denizen of Britain. Here it would moſt probably grow luxuriantly, as in a much warmer region than its own: it would bear our ſevereſt winters, and be a moſt agreeable addition to our evergreens; and, what is ſtill of more importance, it would probably furniſh us with a valuable medicine.

Captain Wallis, though unſucceſsful in his endeavours, has ſet an excellent example; and if thoſe gentlemen who in future may

may be employed by their country in thoſe parts of the world take every opportunity of bringing either ripe ſeeds or plants to Falkland's Iſlands, or to England if poſſible, they would merit the thanks of the lovers of ſuch ornaments, and render an eſſential ſervice to the public. I am

Your Friend and Colleague,

J. FOTHERGILL.

XIX.

XIX. *Of a* Painful Affection *of the* Face*.

To the MEDICAL SOCIETY in LONDON.

GENTLEMEN,

WHEN I related to you, at one of our late aſſemblies, the purport of the following narrative, ſeveral inſtances of a ſimilar affection were then recollected; caſes, which, though nearly akin in appearance to the tooth-ach, and that kind of diſorder of the jaw which is ſometimes called the rheumatiſm, ſometimes the ague in the head, and which had not given way to thoſe remedies and applications which in ſuch complaints are moſt commonly ſucceſsful in curing them; you then thought that a more particular account of this diſeaſe, and the method of removing it, might not be unacceptable to the public; for though it does not every day occur, yet to be able to diſtinguiſh and to cure, with ſome degree of certainty, a diſeaſe, that, during the time it

* From Medical Obſervations and Inquiries, vol. v.

laſts,

laſts, is extremely excruciating, is an addition, however ſmall, to the utility of our profeſſion.

In the third volume of the Medical Obſervations, among the remarks on the efficacy of hemlock in relieving ſome anomalous pains, there is one caſe mentioned of a perſon cured by it of a painful diſeaſe affecting the face*. It is a diſeaſe that has occurred to me ſeveral times; it ſeems to be of a ſingular nature, and, ſo far as I know, altogether undeſcribed.

This affection ſeems to be peculiar to perſons advancing in years, and to women more than to men. I never met with it in any one much under forty, but after this period, no age is exempt from it.

The caſe does not occur very frequently. I can recollect but about fourteen inſtances in the courſe of my buſineſs.

This laſt year I was conſulted for two women, one near eighty, the other about

* See p. 325 & ſeqq. of this volume.

fifty years of age, both of them in other reſpects healthy.

From imperceptible beginnings, a pain attacks ſome part or other of the face, or the ſide of the head: ſometimes about the orbit of the eye, ſometimes the *oſſa malarum*, ſometimes the temporal bones, are the parts complained of. The pain comes ſuddenly, and is excruciating; it laſts but a ſhort time, perhaps a quarter or half a minute, and then goes off; it returns at irregular intervals, ſometimes in half an hour, ſometimes there are two or three repetitions in a few minutes.

The kind of pain is deſcribed differently by different perſons, as may be reaſonably expected; but one ſees enough to excite one's compaſſion, if preſent during the paroxyſm.

It returns full as often in the day as in the night. Eating will bring it on ſome perſons. Talking, or the leaſt motion of the muſcles of the face, affects others; the gentleſt

gentleſt touch of a hand or a handkerchief will ſometimes bring on the pain, whilſt a ſtrong preſſure on the part has no effect.

It differs from the tooth-ach eſſentially in many reſpects. It affects ſome who, from age, have few or no teeth remaining. It moſt commonly ſeizes ſome part above the ſockets of the teeth, yet the teeth are ſometimes affected with an exquiſite ſenſibility, upon endeavouring to chew even the ſofteſt ſubſtance. The lower jaw is ſeldom attacked with this diſeaſe.

It differs likewiſe from that diſorder which has obtained the name of an ague or rheumatiſm in the face, a diſorder as painful as it is frequent. This, though it is often connected with ſome decay in the teeth and the nerves that are diſtributed to them, yet for the moſt part its exacerbations are regular in reſpect of time, like the fit of an ague; and at night, as in the rheumatiſm.

The tooth-ach, ariſing from a faulty tooth, does not often indeed afford much remiſſion

from pain, till either the inflammation is abated by ſome means, or the nerve is deſtroyed, or rendered leſs ſenſible.

But when to the uſual cauſe of a tooth-ach this rheumatic diſpoſition is conjoined, though the pains are never intirely off, yet the night is the time of their greateſt ſeverity. Beſides, the ſeaſon of the tooth-ach and this ſpecies of rheumatiſm is generally from the end of adoleſcence to the meridian of life, or later.

The diſeaſe which is the ſubject of this eſſay is ſeldom obſerved till between forty and fifty, and through the later ſtages of life. Contrary to what happens in the preceding complaints, the affection I am treating of is moſt commonly ſeverer in the day than in the night; ſometimes, indeed, it is excited to an extreme degree of violence by the lighteſt touch of the bed-clothes, which can ſcarcely be avoided in turning, or any other motion in bed.

Some

Some painful affections of the head, and which ſometimes extend to the face, likewiſe occur in practice, that ariſe from ancient venereal complaints imperfectly cured,

Theſe likewiſe, as the rheumatiſm above mentioned, are always moſt ſevere in the night; they come on inſenſibly about bedtime, they increaſe till morning, then abate, ſo as to allow a few hours ſleep, and are little felt in the day. The pain is deſcribed by the patient to be in the bone itſelf, and as if bored with a gimlet, or ſome other inſtrument. From its commencement in the evening till it abates in the morning, it never is entirely off, nor does it ſhift from one part to another of the head and face, as frequently happens in the rheumatiſm; beſides, a little inquiry generally affords one ſufficient grounds to juſtify the treating of it as a venereal complaint.

One of the firſt caſes I met with was in a widow gentlewoman of about ſixty-five years of age, who in general had enjoyed a good ſhare of health, in eaſy circumſtances, and without

without any apparent cauſe of anxiety, or other latent cauſes of diſeaſe.

In a moment ſhe would be ſeized with the moſt acute excruciating pain, affecting the inner *canthus* of the eye: it laſted but a few ſeconds, forced out the tears, and gradually went off. In a few minutes the ſame thing happened, and in like manner at unequal diſtances during the day, ſo as to occaſion a life of great miſery.

Its appearance was like that of a ſevere ſpaſm: it had been conſidered as ſuch, and treated, though ineffectually, with the moſt efficacious antiſpaſmodics, but to little purpoſe; the pain ſtill continued returning in the ſame manner. Opium in conſiderable doſes was the only medicine that procured relief; but the coſtiveneſs it occaſioned, the thirſt and head-ach, almoſt made her of opinion, that the remedy was not leſs difficult to bear than the diſeaſe. At length, however, it ſeemed to decline by the uſe of extract of hemlock, together with her ſtrength, general ill health enſued, and

ſhe continued a ſufferer by it to her death.

As I was often preſent when theſe exacerbations happened, it was not difficult to recollect the diſeaſe when I met with it in other ſubjects, ſeveral of whom I have ſeen, and always with concern, as the methods I had purſued for the moſt part obtained but a temporary relief, till I made uſe of the extract of hemlock in the caſe above mentioned. Since that time I have had recourſe to it whenever the diſeaſe occurred, and for the moſt part with ſucceſs.

One of the laſt caſes I met with was one of the moſt obſtinate I had ſeen. A gentlewoman near fifty, of a full habit, rather ſtrong make, accuſtomed to plenty, and uſing much and various exerciſe, had been ſeized with a violent pain affecting one ſide of her head and face, from the upper edge of the temporal muſcle down its whole extent, and reaching to the teeth on that ſide. Before I had been in the room two minutes, I ſuſpected, from the violent contortions of the face and the whole body, that her complaint

plaint was of the kind I have been deſcribing. Not that theſe contortions are ſpaſmodic or involuntary, but ſuch as ſevere pain often occaſions, when we endeavour to abate the ſenſe of pain in one part by a general exertion of force upon ſome other, or over the whole body. Speaking, or chewing, or even ſlightly touching the ſkin or the ſide affected with the ſofteſt handkerchief, would immediately excite the pain, which, after continuing perhaps a quarter or half a minute, gradually went off, till it was again awakened by ſome freſh motion. She had been under the care of ſeveral perſons of eminence in the profeſſion, who had ſcarcely left any rational methods of relieving her unattempted. She had no fever, no other indiſpoſition that pointed out means of relief.

The extract of hemlock was ordered; the quantity gradually increaſed to a full doſe; and this was continued almoſt a month before any conſiderable amendment was obſerved. So much relief, however, was obtained as to encourage us to proceed. Some-

times indeed it returned for a few days with as much violence as ever. Still we perſiſted. It was almoſt a year that ſhe perſevered in this method, and to her entire ſatisfaction; as near another year has elapſed without perceiving any intimation of it. She took no other medicine during the uſe of the extract, except ſometimes a gentle laxative when occaſion required, nor was her diet altered; only ſome cautions given to uſe the lighteſt, leaſt ſavoury kinds, and with ſome reſtrictions in regard to quantity.

In caſes of ſingular difficulty and obſtinacy, it is natural for us to be inquiſitive into their cauſes and their nature; unſucceſsful experiments ſometimes lead the way to inſtruction; and we ought never to ceaſe inveſtigating the moſt abſtruſe receſſes of nature, nor at the ſame time forget the narrow limits of our capacity, and the danger of preſumption. What therefore I have to offer upon the nature of this diſeaſe, is rather ſubmitted to your conſideration as matter of farther inquiry, than as opinions ſufficiently eſtabliſhed.

On

On reviewing the caſes I have ſeen of this diſorder, I recollected the ſubjects were moſtly women.

That they were for the moſt part, if not all, paſt the time of menſtruation. That they were generally of a firm and ſomewhat robuſt habit, generally with black hair, and not ſubject to any particular diſeaſes. Moſt of them had borne children; and nothing remarkable had occurred about the ceſſation of the menſes; in general, rather of a coſtive habit; and in the middling ſituations of life.

In two of theſe caſes, a ſmall hard tumour in the breaſt had occaſioned ſome ſuſpicion of a ſcirrhus; but had never proceeded to give trouble.

Theſe appearances, however, excited my attention, and induced me to ſuſpect that the cauſe of theſe extreme pains in the face might poſſibly be of a cancerous nature; the method of cure and other circumſtances ſeem to corroborate the ſuſpicion.

The ſex, the time of life, two caſes where a tendency to this was obvious, as well as the kind of pain, which was ſudden, frequent, and ſevere, and as ſuddenly remitting, were to me farther confirmations.

In tracing the hiſtory of perſons afflicted with cancers not apparently proceeding from external cauſes, we ſhall find for the moſt part they have been afflicted with erratick pains in the limbs, often about the loins, ſometimes in the thighs, and other muſcular parts. Theſe have commonly been conſidered by the patients as merely rheumatic; but if we inquire more particularly, we ſhall find they are very different. They are not always worſe in the night than the day. They are not a dull, heavy, aching pain, and continual; but ſharp, lancinating, and remittent. They are not much affected by the weather, nor by any obvious cauſes; and they frequently diſappear for ſome time; at leaſt, there is a conſiderable abatement in their violence.

Theſe

Theſe pains do not always ceaſe when the cancer becomes obvious: they are ſometimes ſevere when the diſeaſe is making great progreſs externally: and experienced ſurgeons well know how little benefit the unhappy patients have to expect from removing the breaſt or other diſeaſed part, if the patients have been long ſubjected to ſuch complaints.

It ſeems not improbable, but that a ſharp, corroſive, cancerous acrimony may long be pervading, like electrical matter, certain ſeries of veſſels, and, when collected in a certain quantity, may create theſe pains; yet without ſeizing upon any part with ſuch violence as to deſtroy its functions. But if a part that favours its operations is once injured, thoſe we call glandular eſpecially, as the breaſts, and the ſubcutaneous glands in the face, and other parts; if theſe become incapable of reſiſting or ſubduing the cancerous matter that may be thrown upon them, the miſchief then becomes evident, and advances in proportion to the combination of thoſe cauſes which favour its pro-

greſs. An original diſpoſition to form ſuch acrimony, bad health, anxiety, external injury, and extreme ſenſibility of pain and danger, ſeem to conſtitute a part of theſe cauſes.

There are few phyſicians, I believe, who may not, on reviewing many caſes which have occurred to them of anomalous pains in different parts of the body, ſo as ſometimes to counterfeit gouty, bilious, and other internal affections of the ſtomach and bowels, perceive ſome analogy between them and the complaints here pointed out.

Perhaps a cancerous acrimony may have been the baſis of ſome of theſe ſtubborn evils, and probably a good deal of miſchief might have been prevented by treating them early as if they were known to be of a cancerous complexion, by opening a drain, by repeated ſmall bleedings, by gentle cooling laxatives, the hemlock, a light diet, and the other uſual auxiliaries in ſuch complaints. It is with a view to promote ſome

attention

attention to this object, that I have troubled you with these reflections.

P. S. Since the preceding account was presented to the Society, I have met with two more cases of this painful affection; and found upon inquiry, that in both these there had been hard, permanent, and painful tumours in the breast.

That these tumours became less painful when the face was attacked; and that both the one and the other had yielded to the efficacy of this medicine, the pain and the tumour both abating.

XX.

XX. *Of the Management proper at the* Ceſſation *of the* Menſes *.

To the MEDICAL SOCIETY in LONDON.

GENTLEMEN,

THERE is a period in the life of Females to which, for the moſt part, they are taught to look with ſome degree of anxiety; as a period on which depends their enjoying a good or bad ſtate of health during the reſidue of their lives.

The various and abſurd opinions relative to the ceaſing of the menſtrual diſcharge, and its conſequences, propagated through ſucceſſive ages, have tended to embitter the hours of many a ſenſible woman. Nor have theſe miſtaken notions been confined to them only; they have occupied the minds of ſuch who ought to have been better informed: ſome practitioners, in other reſpects able and judicious, if they have not favoured

* From Medical Obſervations and Inquiries, vol. v.

theſe

theſe erroneous and terrifying notions, ſeem not to have endeavoured to correct, with the diligence and humanity which an object like this requires.

The deſign of this Eſſay is to contribute my mite towards ſo neceſſary a purpoſe; to aſſiſt in removing theſe groundleſs apprehenſions, and to ſubſtitute a reaſonable confidence, that, with very little aid, Nature is ſufficient to provide for her own ſecurity on this occaſion.

You muſt forget for a moment that I am ſubmitting theſe remarks to the judgment of a Society, every member of which, perhaps, is as capable of this work, and ſome much better than myſelf. I am writing to many ſenſible young men in the profeſſion of phyſic, who, though they may have applied themſelves to the general ſtudy and practice of our profeſſion with diligence and ſucceſs, may not yet, perhaps, know where to look for ſuch information on this ſubject as may be ſufficient to ſatisfy themſelves and their

their patients, what management is proper when the menſes are about to ceaſe.

To propoſe a regimen that ſhall ſuit all the different caſes that may occur, would require a volume. To give ſome general direction is all I propoſe, without entering into a minute deſcription of the commencement, progreſs, and termination of the menſes. I muſt ſuppoſe every thing of this kind is already known, and that the ſingle queſtion is, what conduct, what management is neceſſary to be obſerved when the menſes are about to ceaſe, by the patient who conſults her phyſician on the occaſion. We are now ſenſible that the menſtrual diſcharge is not, what it was too long and too generally believed to be by many of the ſex, an evacuation of peccant matter and morbid humour, ſometimes acrimonious and malignant, whoſe retention never fails to be extremely injurious, from its noxious qualities, to the conſtitution. What opinion the ancients entertained concerning it, I need not repeat to you: That its malignancy was ſuch as to affect even inanimate bodies. But

theſe

theſe fables are wholly diſbelieved, except by ſome of thoſe who ought to be undeceived in a matter that ſo much concerns them.

It is now well known, and the ſex cannot be too generally apprized of it, that the menſtrual diſcharge poſſeſſes no ſuch injurious or malignant properties; that it is ſolely a redundancy of that pure, vital blood which animates the whole frame of a healthy perſon; and that its retention is by no means attended, in general, with effects that are not as eaſily removed as any diſorder to which they are ſubject.

That ſome acrimonious, morbid humours may be diſcharged together with the menſes, when any ſuch exiſt, is not improbable. So it happens likewiſe to men ſubject to the piles, or other preternatural excretions.

Women who have unhappily imbibed that prejudice, are naturally alarmed at the conſequences they apprehend muſt enſue from ſuch a change in their conſtitution; and

and the more ſtrongly they are prepoſſeſſed with a belief, that by this channel has been regularly diſcharged whatever had a tendency to produce diſeaſes, the more they are terrified with apprehenſions of ſome of the worſt complaints: and, indeed, it is not ſeldom that, by ſuch anxiety, they bring on diſorders that are not eaſily removed, attributing them to the cauſe we are ſpeaking of, whilſt they principally originate from anxiety.

For the moſt part, the menſtrual diſcharge, as has been mentioned, proceeds from a redundancy of good and healthy blood: this redundancy is formed for the moſt neceſſary purpoſes; continues whilſt this neceſſity ſubſiſts; and ceaſes when, according to the conſtitution of the female frame, it is no longer required.

The powers communicated to the human ſyſtem, generally expreſſed by the term Nature, are ſuch as ſpontaneouſly bring about this ceſſation. The proviſion for the menſes ceaſes, an extra quantity of blood

is not generated, and the veſſels provided for its regular diſcharge by degrees collapſe, and in general all this proceeds without any the leaſt interruption to the health of the ſubject in which this alteration happens. Here it might not be improper to mention at what time this alteration firſt begins, and the general period of its ceſſation. Theſe circumſtances, however, may be found elſewhere ſo amply treated of, as to render it as unneceſſary as it is foreign to my preſent deſign.

There are great numbers of women in whom the menſtrual diſcharge ceaſes, without their perceiving any alteration in their uſual health. There are ſome who, from being invalids during a part of the ſeaſon which is appropriated to menſtruation, find themſelves by degrees recovering health and vigour, to which they have been ſtrangers during that period when this diſcharge leaves them entirely. Very tender, delicate, relaxed habits ſubject to copious diſcharges, are often much benefited by the ceſſation. All, however, are not ſo fortunate. Some alter-

alterations frequently ſupervene, that render aſſiſtance neceſſary.

Amongſt theſe alterations, the moſt frequent are ſuch as ariſe from a redundancy of blood and immoderate diſcharges from various cauſes.

About the time when this change is to happen, or not long after, many perſons find the diſorders to which they have heretofore been ſubject, more frequent and more troubleſome. Some are afflicted with the well-known ſymptoms of plethora, heat, fluſhings, reſtleſs nights, troubleſome dreams, and unequal ſpirits; others are attacked with inflammations of the bowels, or other internal parts, ſpaſmodic affections of various parts, ſtiffneſs in the limbs, ſwelled ancles, with pain and inflammation, the piles, and other effects of plenitude. In theſe caſes it ſeems as if the organs, which were inſtituted with a deſign of providing the natural ſurplus, continued to produce this effect, whilſt the ſize of the veſſels deſtined to diſcharge it, was diminiſhed, or they were collapſed entirely.

This

This caſe is oppoſite to the former, in that the organs of excretion continued to execute their functions, and actually diſcharged a portion of blood from the common maſs, whilſt thoſe organs which are formed to provide a ſurplus in enfeebled habits, were only capable of maintaining the neceſſary ſtock. And on the diſparity in the operations of theſe two different organs, in fact, depend moſt of the complaints incident to the ſex at this particular period. In ſome, the proviſion ceaſes before any change is produced in the excretory veſſels. In others, the excretory veſſels become unfit for their office, whilſt the organs for accumulating blood continue to be efficacious.

From this view of the ſubject, it will be leſs difficult for the practitioner to form a judgment of what is fit to be done on various emergencies: it will be eaſy to diſcover how far evacuations are likely to avail; and when other means become neceſſary. Thoſe of full plethoric habits, accuſtomed to copious evacuations, will find great re-

lief by bleeding frequently in moderate quantities, keeping the bowels lax, and moderating their diet. They are, for the moſt part, attacked about the time of menſtruation with ſudden fluſhing heats, ſucceeded by inſtantaneous ſweats, continuing for a few ſeconds, then going off for a ſhort time, and again recurring many times in the day; they are worſt after eating, in a room much heated, in large aſſemblies, in bed, attended with reſtleſſneſs and frightful dreams. Theſe gradually abate for a few weeks, and as the period approaches again, come on, and ſo ſucceſſively, for a year or two, or more, terminating ſometimes in large immoderate fluxes; ſometimes in apoplexies, palſies, and other diſeaſes ariſing from plenitude.

If ſuch are adviſed to loſe four, five or ſix ounces of blood, at the diſtance of two, three, or four months, juſt as the vehemence of the ſymptoms requires, every thing of this may be happily prevented; and as the occaſion for bleeding daily decreaſes, its repetition may be put off to longer intervals. It

It happens frequently, that ſome circumſtances attend the patients, which induce practitioners to omit this operation, or at leaſt induce the patients to object to it in ſuch a manner as to get it poſtponed. They allege they are ſubject to nervous complaints; they never could bear bleeding; it always hurt them, and the like. But with a full, hard pulſe, great heat, and the other ſymptoms deſcribed, one need not fear the increaſe of any ſuch complaints; on the contrary, as they proceed ſo evidently from plenitude, they ſeldom fail to give way to moderate and repeated evacuations.

It is not unuſual in ſuch caſes to be informed that the patient has ſwelled ancles; and that bleeding would inevitably, at that time of life, bring on a dropſy. But if this fulneſs appears to be hard, inflamed, and painful, as is moſt commonly the caſe in ſome degree, the lancet and ſome gentle laxative will ſcarcely fail of removing, inſtead of aggravating, the complaint; and recourſe may be had to the ſame remedies, if the like complaints recur.

There is another circumſtance often happens at this period, ſometimes owing to the neglect of evacuations at a proper time, ſometimes to the uſe of improper medicines, ſometimes to the peculiar conſtitution of the patient; I mean an immoderate flux of the menſes, which often requires the utmoſt care in its reſtraint and future regulation.

For the moſt part this happens to women of ſanguine habits, living well, accuſtomed to copious evacuations, or to the general effects of plenitude.

If, in ſuch conſtitutions, the evacuations are not very conſiderable, their health is often interrupted, either by frequent inflammations of the tonſils, and other glandular parts, or they have the rheumatiſm, eryſipelas, or the piles; if in theſe habits the menſes ceaſe very ſuddenly, they are either expoſed to the complaints above mentioned, more frequently, and to a more violent degree, or to repeated and exceſſive floodings. A little attention to theſe circumſtances will often point out the means of effectual prevention.

vention. But if it does happen, it ſeems much more prudent to reſtrain the flux by gentle laxatives, cooling medicines, reſt, anodynes, a moſt ſparing diet, and this not too liquid, than by very copious bleeding, and aſtringents of any kind.

There is another kind of habit to which ſuch immoderate diſcharges are too familiar;—to perſons of very irritable conſtitutions, and at the ſame time not remarkably plethoric. If in ſuch conſtitutions the menſes go off very ſuddenly, it happens ſometimes that the impetus of the blood on the uterine ſyſtem produces a violent hemorrhage that enfeebles extremely at the time, and, as it increaſes the irritability of that part of the ſyſtem in particular, ſubjects the patient to very frequent and expenſive relapſes.

In theſe caſes, bleeding would undoubtedly increaſe the diſeaſe. Medicines that allay irritation, anodynes, quiet, a moderate cordial, as wine, and a light nutritive diet, at once take off the cauſe, and enable the pa-

tient to ſupport the expence with the leſs difficulty.

It has happened that a regular intermittent has been attended with a regular and immoderate flux. In ſeaſons when autumnal intermittents are frequent, ſuch circumſtances will now and then happen to patients who have ſuffered conſiderable loſs about the time of ceſſation. In ſuch caſes, the bark given with the ſame freedom as in curing the ague, ſafely cures both the flux and the intermittent.

Sometimes theſe immoderate fluxes proceed from ſome irritating cauſe reſident in the uterus or the parts contiguous to it. And amongſt theſe none is more common than that depoſition of acrimony which precedes a cancer of the parts.

In ſuch caſes the moſt appoſite remedies are often ineffectual. The flux is attended with pain and heat darting acroſs the pubes, from hip to hip, and down to the middle of the thigh. Large clots of blood are frequently

quently diſcharged, that give exquiſite pain in paſſing, and at the ſame time the flux is increaſed by the ſtimulus.

It is not uncommon in ſuch caſes to ſee the bark adminiſtered very freely, and I am afraid to no good purpoſe. Indeed it requires the hand of a maſter to give this medicine properly in uterine diſcharges. In caſes of plenitude it is injurious; it ſeems to be ſo likewiſe in this caſe juſt deſcribed. In ſuch as proceed from mere debility and relaxation, it may ſtand a much better chance of being uſeful; but it is to be feared, that incipient, ſcirrhous, and other obſtructions have been much aggravated by the injudicious exhibition to reſtrain a diſcharge which depended on cauſes not in the power of this great medicine to ſubdue.

To enter into all the particulars that attend this event will be unneceſſary. Permit me, however, to make ſome remarks upon the kind of purgatives that are much in uſe upon theſe occaſions, and to ſome of which there are very juſt objections.

An opinion generally prevails among the ſex, that purgatives are particularly neceſſary at this juncture; and is aſſented to by the generality of practitioners, who, had they made a proper choice, would have acted more prudently. Various preparations of aloes, the *tinctura ſacra*, *pil. Ruſi*, *elixir proprietatis*, and other compoſitions of this kind are recommended, from one to another, as proper purgatives to be uſed on the ceſſation of the menſes.

But if we reflect a little upon the known effects of this drug, in all its preparations, we ſhall find it almoſt uniformly producing the piles, if taken long together, and in conſiderable doſes.

From its effect in ſtimulating the hemorrhoidal veins and contiguous parts, it has long been adopted as the baſis of moſt medicines exhibited with a view to promote the menſtrual diſcharge in young females, where it does not appear at the uſual time, or in a proper quantity, and often with ſucceſs. It can ſcarcely then be rational to give

that

that medicine, which is found to be efficacious from its power of irritating the hemorrhoidal and contiguous veſſels, and determining the blood with a due degree of force on the uterus, to produce the menſes, at a time when we are endeavouring to abate this impetus, rather than increaſe it: in ſhort, it ſeems highly abſurd to make uſe of thoſe medicines when the menſes are about to ceaſe, and ought ſo to do, which are given to provoke and promote this evacuation. Inſtead, therefore, of countenancing a practice which is not only unreaſonable in theory, but injurious in practice, every convenient opportunity ought to be embraced, to expoſe and correct a popular error, than which perhaps there are few in the circle of medicine that are more miſchievous.

Repeated inſtances have occurred to me, of grievous inconveniences ariſing from theſe heating medicines; the piles, ſtrangury, immoderate diſcharges of the menſes, racking pains in the loins repreſenting labour-pains, and other ſimilar complaints.

There

There are many perſons, it is true, who cannot eaſily bear the more cooling purgatives; very tender, delicate habits are moſtly affected by them: but it is not difficult to contrive cathartics, neither heating like the aloes, and other gummy, reſinous medicines, nor yet chilling as the ſalts. Rhubarb, ſena, magneſia, ſulphur medicines, ſmall doſes of jalap, and various combinations of them, will ſupply ſufficient variety to the preſcriber and the patient.

It will be of more efficacy in curing of complaints ariſing from the cauſes we are treating of, to contrive ſome eaſy method of preventing coſtiveneſs, than to be dealing often and freely with purgatives of any kind. It happens in ſome conſtitutions, that the menſtrual diſcharge is protracted much beyond the uſual period of its ceſſation in others. Whilſt it proceeds regularly, comes at the proper time, and in due quantity, the patient in the mean time perceiving no inconveniency, no perceptions of declining health, ſuffers it to keep its courſe, without attempting to reſtrain it. Should the health

in general ſuffer by it, the ſame means that ſucceed in leſſening immoderate diſcharges, may properly be applied in this caſe.

When the menſes are about to go off, for the moſt part they appear irregularly, both in time and quantity; once in a fortnight, three, five, or ſix weeks, ſometimes very ſparingly, at other times in immoderate quantities.

Great loſſes of this kind are often prevented by taking away four or five ounces of blood, a few days after the firſt menſtrual ſuppreſſion. This prevents the accumulated blood from ruſhing with force upon the uterine veſſels at the enſuing period, and producing pain or a too copious hemorrhage. By degrees the occaſion for ſuch artificial evacuation diminiſhes, and the patient's health becomes firmly eſtabliſhed.

An opinion in favour of iſſues at this period of life has occupied the minds of many patients; ſome with the hopes of preventing all future evils capable of proceeding from this

this cauſe; others with the terror of carrying about with them for life a drain which they think of with extreme diſguſt. Perhaps the uſe of theſe outlets deſerves ſome conſideration. When a patient has in early life been ſubject to cutaneous eruptions, ſore eyes, glandular ſwellings, or other obvious marks of morbid humour ſubſiſting in the conſtitution, and all which may have diſappeared about the time the menſes became regular, if no invincible oppoſition is made to it, a drain is now certainly adviſeable, and may prevent many inconveniences.

Should any cutaneous foulneſſes, any ulcerations, any fugitive pains of the cancerous or rheumatic kind, hardneſſes in the breaſt, or other parts, be evident, all ſuch complaints would probably be in part relieved by iſſues. But when none of theſe circumſtances appear, or have appeared, it ſeems ſcarce reaſonable either to propoſe or permit a certain inconveniency, to call it by no harſher a term, in order to cure a diſeaſe that has no exiſtence.

It is neceſſary to enjoin, in many caſes, a moſt ſtrict attention to diet and exerciſe, to the full and plethorick eſpecially. Meat-ſuppers ſhould be avoided as much as poſſible, and likewiſe much animal food, by thoſe who are liable to immoderate evacuations. If they could ſubſiſt two or three days in a week on pudding, vegetables, and things prepared from them, ſuch a method would contribute greatly to prevent not only theſe copious diſcharges, but various accidents that ariſe from plenitude, ſuch as palſies, apoplexies, fevers, and inflammations. Their liquors ſhould be regulated likewiſe by a ſimilar ſcale.

They ſhould avoid all heating exerciſe, frequenting large aſſemblies or hot cloſe rooms, near the approach of the uſual period. In the intervals, exerciſe will be extremely neceſſary.

It will not be altogether foreign to this ſubject, to mention two caſes which now and then occur in practice, and ſometimes coſt both the patient and phyſician ſome perplexity.

A woman

A woman enjoying very good health, ſometimes is ſeized with a total ſuppreſſion of the menſes, much ſooner than they ought to diſappear, perhaps ſoon after thirty years of age. A fever, ſurprize, anxiety, ſudden and violent cold, eſpecially if it happens at the time, will put a total ſtop to the diſcharge.

For many months, ſometimes a year or two, ſhe feels very little effect upon her health by this ſuppreſſion, perhaps grows plump, and ſeems diſpoſed to corpulency; by degrees, however, ſhe perceives herſelf not to be ſo well as uſual; ſhe is liable to colds, inflammations of the tonſils, eryſipelatous eruptions, rheumatiſms, but moſt commonly ſevere affections of the bowels, either inflammatory, bilious, or ſpaſmodic; one or other of theſe return frequently, and often violently, in ſix weeks, two months, or longer, but at no very regular periods; and in this manner continue to haraſs the conſtitution (if the perſon ſurvives the ſevere attacks of the colic or other diſorders incident to this ſtate) till about the time when

when the menſes ſhould ceaſe ſpontaneouſly.

An attention to the cauſe of theſe diſorders ſupplies us with a natural and efficacious remedy. Subſtitute at convenient diſtances artificial evacuations, inſtead of the natural one that is ſuppreſſed, and, if poſſible, previous to the diſorders to which the ſuppreſſion has given riſe; bleeding in ſmall quantities two or three times a year; moderate purgatives frequently exhibited, and, particularly, attention to their diet, which ought to be moderate and mild. At the firſt ſenſations of ſickneſs, or great heat and reſtleſſneſs, or pains beginning to affect the ſtomach or bowels, or any of thoſe ſymptoms which have uſually been the forerunners of the diſorders above mentioned, then is the ſeaſon for preventing thoſe difficulties which ariſe from this preternatural ſuppreſſion.

Another caſe likewiſe ſometimes occurs in practice, which it may not perhaps be improper to mention.

Women

Women of an apparently healthy, ſanguine conſtitution, diſpoſed to corpulency, uſing little exerciſe, accuſtomed to live plentifully, perceive a ſudden ſuppreſſion of the menſes, at a time of life when there is reaſon to expect many years continuance; from thirty-five years of age and upwards; in a little time they grow full, the belly ſeems to ſwell, with tenſive pains, pain in the breaſt, ſome enlargement of them likewiſe, ſome little ſickneſs in the mornings, diſlike to particular foods, and other ſymptoms ſimilar to thoſe of pregnancy; and married women are ſo fully ſatisfied of it, as to believe themſelves in this ſituation, and that they actually perceive the motions of the child.

This circumſtance happens moſt commonly to thoſe women who have been married rather late in life, *viz.* between thirty and forty. Their inexperience leads them to take up with the opinions of thoſe about them, and they are ſometimes not undeceived till the time of geſtation is much exceeded.

Women

Women alſo who have been long married and had children, ſeveral years after the menſes ſtop, ſuddenly they grow bigger, ſuſpect pregnancy, and treat themſelves accordingly; abſtaining from exerciſe, eat what their appetites, often craving and depraved, require, till they have exceeded their reckoning, ſo long as to be ſure they have been miſtaken.

The like complaint happens now and then likewiſe to ſingle women about the age of forty, or near the time when this evacuation ought to ſtop. The belly grows large, they become unwieldy, their legs ſwell, and the apprehenſion of a dropſy brings on a variety of complaints. The hemorrhoids are commonly the attendants of all theſe ſubjects. Sometimes one may trace out ſome probable cauſes from which this preternatural ſtate may probably be derived, but not always clearly. The proper treatment is, however, not difficult to diſcover. The general turgeſcence, though it proceeds primarily from a retention of the menſes, does not appear to be confined to

the uterine veſſels alone; all the venous ſyſtem of the lower belly is affected; the lymphatics alſo, in conſequence of the general oppreſſion. The legs often ſwell, the piles are almoſt always troubleſome; the patients are generally coſtive, the urine in ſmall quantities and often diſcharged, and all the thinner ſecretions diminiſhed. Yet the countenance and appearance of the whole habit denote a general plenitude, but very different from the bloated body of an hydropic. Repeated bleeding in ſmall quantities always gives relief. Sulphur and magneſia, or other eaſy laxatives given conſtantly, prevent the piles, and keep the belly gently open. Regular exerciſe on horſeback, or in a carriage, is quite neceſſary to effect a cure, which is for the moſt part ſlow and tedious, but in general certain. Purgatives approaching to the draſtic kind are often injurious, and ſo are copious evacuations by bleeding, though ſmall ones are eſſentially neceſſary. Their diet ſhould be light, but not too liquid. By means like theſe the general fullneſs gradually ſubſides; they ſeldom have any return of the menſes,

menſes, except now and then ſome ſlight intimations.

Permit me to mention another caſe, which, though it does not abſolutely relate to the preſent ſubject, is not quite foreign to it. Nothing, perhaps, is more excruciating to the patients, nor in common more difficult to cure, than painful menſtruation; it impairs their health at preſent, and ſeems to render them leſs prolific in future: To the ſufferers it is a moſt ſerious evil. By the following ſhort proceſs I have been happy enough to relieve ſeveral: Let the patient have by her a few pills, conſiſting of *extr. theb. gr.* j. each, made ſoft with a little of any kind of conſerve. She is to take one of theſe pills the moment ſhe finds the pain attending this diſcharge coming on. A pill may be taken every hour till the pain goes off; they ſeldom require more than two of theſe pills; one is often ſufficient, if given early; and it ought to be a conſtant rule obſerved in adminiſtering anodynes, to give them, when they are plainly indicated, early. It requires much leſs of an opiate to obviate pain than to quiet it when acute.

Let the patient keep either in or upon the bed, at leaſt in a recumbent poſture; let her drink moderately of any diluting liquor, any of the herb teas, weak whey, thin broth, or what elſe her conſtitution may particularly require.

When the time is paſt, a courſe of chalybeate bitters, in ſmall doſes, may be continued till within a few days of the return; and the belly ſhould be kept open by ſome proper laxative; two or three grains of *cathart. extract.* with half the quantity of *calx antimonii illota*, taken every night, will often ſucceed perfectly well. The anodyne muſt ſtill be in readineſs to take when the pain comes on, and to be taken to ſuch a quantity as to mitigate the pain, let the doſe be what it may.

This excruciating pain ſeems to be ſpaſmodic, and to proceed from the extreme irritability of the uterine ſyſtem: The blood naturally determined hither, in order to its being diſcharged, by diſtending the very irritable veſſels, occaſions the ſpaſm; this pro-

produces a conſtriction of the veſſels; they become impervious, and the niſus to the diſcharge continuing, the pain becomes exquiſite and general, till the patient, worn out with the ſtruggle, is debilitated and ſunk; the fluids are then diſmiſſed, ſome eaſe ſucceeds, but the patient is often ſo reduced as not to recover her uſual ſtrength before ſhe has another conflict to undergo.

The *fluor albus* is frequently the conſequence of this ſtruggle, and it would ſeem as if the *uterus* itſelf was ſo far a ſufferer as to be rendered by degrees leſs fit for fecundation. I think it has been obſerved by other phyſicians, as well as myſelf, that few of thoſe who have ſuffered much in the manner here deſcribed, have borne children.

XXI. *The Caſe of a* Hydrophobia *.

I SHALL introduce what I have to ſay upon this Caſe by an account of what happened before I ſaw the patient, as it was drawn up by W. French, his apothecary.

" MR. CHARLES BELLAMY, of Hol-
" born, aged forty years, on the 14th of
" February 1774, was bit by a cat, which
" was killed the ſame morning.

* This paper, which was originally publiſhed in the *Med. Obſ. & Inq.* vol. v. was afterwards reprinted in the form of a pamphlet, with the following Preface, and Additional Obſervations.

" I HAVE been ſolicited to reprint the following Caſe,
" that it might paſs into many hands where the work in
" which it was firſt inſerted may never come. I yielded to
" this ſolicitation the more eaſily, when I found that neither
" the Society to which it was preſented, nor the Bookſeller
" whoſe property it is, had any objection to its being pub-
" liſhed in this manner.

" The reader muſt not expect to find in it a cure for the
" Canine Madneſs. He will find, perhaps, nothing more
" of certainty in this reſpect, than that ALL the remedies
" hitherto propoſed, either as preventatives, or cures, are
" found by experience to be altogether ineffectual.

" To rely on any popular means of preventing the fatal
" effects of this poiſon, whether known and generally di-
" vulged, or preſerved as ſecrets, which, as the Tonquin
" medicine, are found to be incompetent and ineffectual,
" is a dangerous deception.

" Were

" The day after, viz. February 15th, he " took the celebrated Ormſkirk medicine, " ſold by Hill and Berry, in Hill-Street, " Berkeley-Square, and conformed to the " directions given by the vender in every " reſpect.

" A ſervant-maid, who was bit in the leg " by the ſame cat, juſt before her maſter " was bitten, took the ſame remedy.

" Were it only to give one incontrovertible fact in evi- " dence againſt ſuch pretenſions, and of courſe to ſtimulate " the faculty to make a farther ſearch after more effectual " relief in this diſtemper, it would be doing ſome ſervice to " Society.

" Dr. Vaughan of Leiceſter has lately publiſhed ſome " caſes of the Hydrophobia, which in divers reſpects con- " firm the intimations given in the cure referred to. And " the very rational, though unſucceſsful, efforts he made to " aſſiſt his patients under this calamity, are proofs of his " attention, and of the hitherto untameable nature of this " ſingular poiſon.

" Let not, however, theſe difficulties diſcourage us from " obſerving every caſe that occurs with attention; and faith- " fully noting every incident that ariſes in the progreſs of " the diſeaſe, perhaps, the united labours of the faculty, " Providence permitting, may, at length, diſcover ſome " effectual remedy.

" To this Caſe are ſubjoined ſome Remarks on the Ca- " nine Madneſs and Hydrophobia, with a view to aſſiſt " thoſe who are called in upon theſe occaſions, to perform " their duty with ſatisfaction to themſelves, and advantage " to their patients."

"About the middle of April he com-
"plained of a pain in his right knee, which
"he ſuppoſed was affected with the rheuma-
"tiſm; he had felt the like pain at times
"during the laſt two years, and had pro-
"cured himſelf eaſe by pumping cold wa-
"ter on the part. On the 7th of June, this
"complaint increaſing, he deſired me to
"attempt ſomething for his relief. I accord-
"ingly ſent him a box of pills, two of
"which were to be taken every night, con-
"taining about one grain of calomel, of
"camph. ipecac. and *pill. ſapon.* two grains
"each, and two tea-ſpoonfuls of Huxham's
"tincture of the bark in buck-bean tea
"twice a-day.

"After having taken theſe medicines
"about ſix days, he diſcovered an unuſual
"titillation in the *urethra*, a contraction of
"the *ſcrotum* and *penis* to a degree of pain,
"and an emiſſion of *ſemen* after making
"water, to which he had frequent calls.

"Alarmed at theſe ſymptoms, which he
"attributed to his medicines, he was deſired

" to diſcontinue them, and to live as tem-
" perately in every reſpect as poſſible.

" On Thurſday the 16th of June, he
" ſent for me in the morning, complained
" much of having had a reſtleſs night, and
" told me, though he had eat ſome bread and
" butter as uſual for his breakfaſt, yet he
" found he could not ſwallow his tea with-
" out difficulty; he attempted it before me,
" and threw a little into his mouth, but with
" the utmoſt agitation.

" Recollecting the accident of the bite,
" and apprehending the moſt ſerious conſe-
" quences, but without diſcovering my ap-
" prehenſions to the patient, I propoſed a
" phyſician might be ſent for. Dr. Fother-
" gill was mentioned by the patient. I met
" the Doctor in a few minutes after, and in-
" formed him of the preceding circum-
" ſtances, and attended him to the place.

W. FRENCH."

Theobald's-Road,
June 30, 1774.

I ſaw

I ſaw the patient above mentioned the 16th in the morning: he was ſitting in his dining-room, without any other appearance of indiſpoſition than a little paleneſs; his countenance cheerful; nothing that diſcovered uneaſineſs or anxiety. He recited very diſtinctly the complaints which he called rheumatic, and which had induced him to apply for help; mentioned his opinion, that his diſorder had been increaſed by the pills, &c. but upon being informed, they could have no ſuch effects, he readily gave up the point. "I have had, ſays he, a very reſtleſs "night; my head has been much out of or-"der; I have ſweated a great deal, was very "faint with it, and have had little or no "ſleep: I was extremely thirſty in the night, "and intended to have regaled myſelf this "morning with a large draught of balm-tea, "which ſtands there ready made; but you "ſhall ſee the difficulty I am under, and which "induces me to aſk your aſſiſtance." He then took up a tea-cupful of common green tea with milk in it, as he drank it commonly for breakfaſt, and brought it within a few inches of his lips with great compoſure: he then

then threw the liquor into his mouth, and ſwallowed it with uncommon haſte and perturbation. "You ſee, ſays he, I can force it "down; ſhall I do this very frequently, or "will you allow me to omit it a while?"

It may be proper in this place to mention, that our patient was a perſon of a good underſtanding, active, diligent, and ſenſible, much eſteemed for his probity; and during his illneſs, he gave proofs of a capacity and reſolution ſuperior to moſt men in the middle ſtations of life.

I deſired him to forbear the attempt, while it continued to affect him with extreme uneaſineſs, but to endeavour to get down bread moiſtened with any liquor he choſe as often as poſſible. The thought pleaſed him, and he got down bits of bread moiſtened with wine without much difficulty, whilſt I ſtaid, and continued ſo to do frequently during the day; and this was the only kind of nouriſhment he got down.

He

He had naturally a lively, penetrating eye; but his aſpect varied frequently and remarkably during our converſation. His pulſe was generally about ninety, and rather hard, but changed almoſt every minute, both in frequency and hardneſs. His fleſh felt moderate, his tongue dry; he made very little urine, and complained much of the contraction of the *ſcrotum*; the emiſſions had almoſt ceaſed, and his bowels had been ſufficiently emptied the preceding morning.

He took not the leaſt notice of his having been bit to me, nor did he appear to have recollected it during the courſe of his illneſs.

We forbore, on this account, to inquire after the ſtate of the wounded part, or to ſay any thing that might lead him to ſuſpect his preſent complaints aroſe from that fatal accident.

To gain a little time for reflection on a caſe ſo ſudden and ſo dangerous, and that nothing which ſeemed reaſonable to be done might

might in the mean time be omitted, I ordered ſix ounces of blood to be taken from the arm; that a ſcruple of native cinnabar, and half a ſcruple of muſk made into a bolus, might be given every four hours; and that as much nouriſhment, fruit, or any thing he choſe, might be got down, as poſſible.

The family were appriſed of the dangerous ſituation he was in, and a conſultation requeſted as early in the evening as might be convenient. Dr. Watſon was pitched upon; we met at five in the evening, the 16th, and received the following account:

He had taken two of the boluſes, had got down ſeveral bits of bread moiſtened with wine, ſome ſtrawberries, a few bits of pudding, but had not attempted to drink any liquor. We requeſted he would then, for our ſatisfaction, endeavour to ſwallow a little liquor: he readily aſſented; it was brought to him; he threw it haſtily into his mouth, and ſwallowed it with difficulty and extreme perturbation; the moment the liquor touched

touched the *gula*, all the muſcles concerned in deglutition appearing to be convulſed.

He repeated to Dr. Watſon very intelligibly and fully the account which he had given me in the morning. His countenance was pale, and he ſeemed much agitated and diſtreſſed; complained of extreme thirſt, and of the impoſſibility of ſwallowing any liquid. His tongue was white, but did not appear dry. He was perpetually endeavouring with great efforts to bring up and diſcharge the viſcid, tenacious phlegm which lined the *fauces*.

The heat of his fleſh was moderate; but his pulſe was quick, hard, and irregular; ſtrong palpitations of the heart, which he made us feel by preſſing our hands to the part.

He was perfectly ſenſible; and, when his endeavours to diſcharge the viſcid phlegm would allow him to ſpeak, gave us pertinent anſwers. He had made but little urine ſince the morning; the dragging, as he called it, of

of the *ſcrotum* ſtill continued, and the uneaſy ſenſation and emiſſion.

The blood which was taken away in the morning had ſome ſlight appearance of inflammation, the *craſſamentum* firm, with ſlight traces of ſize, but the *ſerum* remarkably yellow. No evacuation by ſtool to-day. Upon the whole, it was evident, that the diſorder had increaſed ſince morning.

Upon maturely conſidering this very hazardous ſtate of things, we agreed upon the following proceſs:

To procure a ſtool or two by means of a clyſter:

That he ſhould then be carried to the warm bath, and remain in it ſo long, and to ſuch a degree of heat, as was moſt agreeable to himſelf:

That at his return a clyſter ſhould be given of a pint of milk and water, and this to be repeated as often as it could be conveniently adminiſtered:

That in the laſt of theſe clyſters a drachm of Dover's powder ſhould be exhibited:

That two drachms of ſtrong mercurial unction ſhould be rubbed by himſelf on his legs and thighs as ſoon as he returned from the bath, and that he ſhould endeavour to get down all the ſuſtenance he could.

We ſaw him early next morning, the 17th, when we received the following account:

The laxative clyſter had produced a proper effect.

The warm bath relieved him greatly whilſt he was in it, ſo that for a time, as he expreſſed it, his ſufferings were ſuſpended. They returned, and with more violence, during the night. The clyſters had been repeated ſeveral times, and the unction applied.

We found he had paſſed a moſt reſtleſs night, totally without ſleep, and in much agitation,

agitation, not being able to lie ſtill a moment.

His countenance beſpoke much diſtreſs, though accompanied with endeavours to conceal it; ſometimes he was calm, then agitated; talked much, but ſenſibly. He had now a copious flow of ſaliva leſs viſcid; his tongue white and moiſt, but foul. His pulſe was very quick, ſmall, hard, and irregular; his hands rather cold than hot. He had made water in the night with leſs difficulty, and without its uſual conſequences; the dragging pain, or ſpaſmodic affection of the *cremaſter* was gone off. In general, his ſtrength and faculties ſeemed leſs impaired than might have been expected, where ſo little ſuſtenance had been taken in, conſtant reſtleſſneſs, and no ſleep.

On conſidering theſe circumſtances, and obſerving there was a more copious flow of ſaliva, the tongue more moiſt, the thirſt leſs, the ſpaſm of the *cremaſter* gone, yet that his difficulty in ſwallowing was not leſs, ſtill no ſleep, but his head ſtill clear:

That his pulſe continued hard and quick; that there were ſome appearances of an inflammatory denſity yeſterday; that he had found relief from the bath, at leaſt, a temporary ſuſpenſion: We agreed,

That he ſhould be blooded ſtanding, according as his ſtrength would bear:

That he ſhould be conveyed to the warm bath, and remain in it as long as he found it agreeable to himſelf:

A clyſter of milk and water to be thrown up at his return from the bath, with a drachm of Dover's powder; and

Half an ounce of mercurial unction to be rubbed on his legs and thighs as ſoon after as might be done conveniently.

One ſcruple of *thebaic. extr.* was ordered to be made into twenty pills, three of theſe to be given when he came out of the bath, and two every hour, till he ſeemed diſpoſed to ſleep.

At

At five in the evening we viſited him again, when he received us with the utmoſt tranſport and joy; and deſcribed in very ſtrong terms the pleaſure and the benefit he received from the warm bath, and the hopes he now conceived of a ſpeedy recovery.

A vaſt quantity of viſcid phlegm was continually flowing into his mouth, which he was as conſtantly employed in diſcharging; for it ſeemed to have the ſame effect upon the organs of deglutition, as if he attempted to ſwallow any other liquor, and gave him extreme uneaſineſs. To get rid of this defluction, the moment he felt it in the *fauces*, he exerted a ſudden and vehement expiration, as if it was with a deſign to blow away the moiſture ſo offenſive to him, with the utmoſt force and expedition. This occaſioned a ſound, which did not ſeem very remote from the hollow barking of a dog.

When he was not employed in theſe efforts, he was talking conſtantly but coherently. His eyes had a particular keenneſs, and all his motions were quick, and vehe-

ment. His pulſe was alſo quick, hard, ſometimes trembling and irregular. His hands were rather cold and clammy, but the general heat of his body not intemperate.

He told us he had taken a great deal of nouriſhment during the day. On inquiry, we found it amounted to no more than on the preceding; a few bits of bread moiſtened with wine, a little pudding, two or three pieces of china orange, which pleaſed him much. He had taken none of the pills.

Previous to his going into the bath, he deſired to be ſhaved; it was readily aſſented to, but proved a more troubleſome operation than he was aware of. The moment the lather touched his face, he fell back with ſurpriſe; but the part being once wetted, he bore the repetition eaſily; every freſh part that was lathered gave him conſiderable emotion; the application of the razor had in a degree a ſimilar effect: in ſhort, every new movement about him gave him ſome freſh alarm, ſome degree of agitation and anxiety. He took notice of this himſelf; "but,

" but, ſays he, I am naturally haſty and " choleric; and when I am got better of " theſe complaints, I hope you will aſſiſt " me in correcting it."

Whilſt he was in the bath, the perſon who attended him, without any particular intention, took up ſome of the warm water in his hand, and poured it on the patient's head and face: this confuſed him much; he deſcribed to us the diſtreſs it gave him at the time very emphatically; and added, with much apparent ſatisfaction, that he had ſo far conquered his averſion to it, that he had poured water on himſelf with his own hand in the ſame manner.

It was in ſpeaking of this affair he mentioned the term *Hydrophobia*; obſerving, that his complaints reſembled it; yet without giving us any reaſon to apprehend he had the leaſt idea of his actually labouring under this fatal diſtemper.

He had not ſlept a moment from the time he was ſeized with the dread of liquids.

He repeatedly expreſſed the ſatisfaction he received from the bath, and wiſhed to go into it again. We conſented, and deſired that he might be carried thither again, and to ſtay in it as long as he choſe it.

Every new operation now became an extreme difficulty to him; dreſſing, undreſſing at the bath, going into the water, which he now did with much intreaty, putting one foot in, and haſtily withdrawing it. He was at length prevailed on to go into it. A recollection of the eaſe he had enjoyed in it before, aided by a manly reſolution that never forſook him, ſubdued his fears, and he remained in it near half an hour. He was brought home about nine o'clock. He refuſed to take the pills, and every other medicine. He grew fretful and reſtleſs, ſoon became delirious, but offered no violence.

After remaining in this condition about two hours, the powers of nature ſunk, he reclined his head gently on the pillow, and expired at half paſt twelve.

Endeavours

Endeavours were uſed to obſerve the condition of the part that was bit, when he was dreſſing after bathing, as far as could be done without alarming him; but ineffectually. After death it was examined with attention, but without perceiving the leaſt morbid appearance.

For this account of his laſt hours, and his behaviour at the bath, I am obliged to my friend, William French, his apothecary, who attended him with the utmoſt conſtancy and humanity.

During our attendance, we learned that this accident happened in the following manner;

The ſervant-maid having occaſion to waſh, roſe earlier than was uſual: upon her entering the waſh-houſe, a cat attacked her, and fixed upon her leg. Her ſcreams brought her maſter to her aſſiſtance; he aimed a blow at the cat, but miſſed it; the cat then ſeized his leg, but he ſoon diſengaged him-

ſelf from her; a chairman paſſing by was called in, who ſoon killed her.

Both the maſter and maid took the Ormſkirk medicine as ſpeedily as poſſible, and obſerved the directions given with it. The maſter's leg ſoon healed, and he ſeems to have thought no more of it. Perhaps fortunately for the girl, her leg did not heal; it grew worſe, and baffled the ſkill of a young ſurgeon to whom ſhe applied. We were told ſhe afterwards got into one of the City hoſpitals, on this account, and we have no doubt but ſhe is ſtill living. Our endeavours to find her out, and to know in what ſituation ſhe is, have not yet been ſucceſsful *.

It is here worth obſerving, that two perſons are bit by a mad cat, at the ſame time: the firſt who was bit, and the moſt ſeverely, eſcapes; the ſecond loſes his life. The wounds of one healed preſently; the other became a ſore, notwithſtanding endeavours to the contrary. Both uſed the ſame preventive means.

* I have ſince learned that her leg continued long in a ſore ſtate, but that ſhe is now perfectly well, Aug. 29, 1774.

May not then the happy eſcape of the girl be owing to the ſore which followed from the bite? It ſeems probable; and affords a very forcible argument for enlarging the wounds made by the bite of mad animals, and promoting a diſcharge from them as long as poſſible. Perhaps this is the only ſure preſervative againſt the direful effects of this malignant venom we are yet acquainted with.

It is with ſome repugnance we point out the inefficacy of a medicine, which in this country has eſtabliſhed a reputation of its being an infallible preſervative. Perhaps it has had its uſe in being ſo eſteemed by the generality; for it is undoubtedly true, that many perſons have ſuffered almoſt as much as they could have done from the moſt poiſonous bite, by repreſenting to themſelves the miſeries they were expoſed to. A medicine that could powerfully aſſuage theſe apprehenſions, from a general opinion of its ſalutary effects, has certainly been beneficial to many; and ſo have a multitude of other famed prophylacticks.

But as this medicine, which has ſurvived the reputation of many others, has in this inſtance been found to be ineffectual; it ſeems to be abſolutely neceſſary to apprize the public of the fact, which, as far as one evidence can extend to, is deciſive: The ſame medicine procured by an unexceptionable hand (the apothecary, who urged its being given, from a thorough perſuaſion of its affording perfect ſecurity) from the place authoriſed to ſell it; and given preciſely according to the preſcriber's directions, to two perſons bit by the ſame animal, and at the ſame time; the perſon firſt bitten eſcapes, the ſecond dies of the *Hydrophobia*.

Was it not of the laſt conſequence to thoſe who may become the unhappy objects of ſuch applications, to be informed that even this medicine had failed of ſucceſs, we ſhould not endeavour to bereave them of the comfort which the unfortunate might derive from an opinion that it was infallible; but when there is ſuch evidence to the contrary, it becomes neceſſary, for the public benefit, to endeavour to remove preju-

dices that may be fatal to the real ſafety of individuals.

To enquire farther into the merits of this, or any other preſervative againſt the poiſonous bite of mad animals, would take up too much room in your collection. This, however, would be no unprofitable employment for a perſon of ſuitable leiſure and abilities; and we are not leſs in doubt about the efficacy of all thoſe remedies which have been urged by the ſeveral propoſers, as extremely beneficial in the cure of this diſtemper, even in its laſt ſtages. We are confident that divers have been mentioned as being cured of the effects of ſuch bites, who never had one genuine ſymptom of the diſeaſe thence ariſing.

At the ſame time that we ſuggeſt opinions which may tend to deſtroy that happy confidence which has prevented much ſuffering to individuals; and whilſt we own our apprehenſions that none of the celebrated medicines hitherto propoſed to the public can ſafely be confided in, either as prophylacticks or as curatives; we would earneſtly recommend

mend one means of preſervation, which not only the preſent inſtance before us, but extenſive experience ſeems to eſtabliſh upon a ſolid foundation; that is, after having waſhed the part, and cleanſed the ſurface as quickly as poſſible from the poiſon, to enlarge the wound immediately by actual cautery, the knife, or any other ſpeedy and effectual method; and to promote the diſcharge as long as is poſſible. This being effectually done, affords the ſureſt ground for a proper confidence and ſecurity againſt future miſchief.

Two circumſtances we take the liberty to ſuggeſt, as deſerving ſome attention.

The firſt is, in caſe of a bite from a mad animal, to recollect what part was bit, and, if through any, through what kind of covering. A bite through thick garments, or leather, as the teeth of the animal would probably be wiped quite clean from the venom, ought to give leſs uneaſineſs than when it happens to the naked ſkin.

Second,

Second, Not to kill the animals, if it can be avoided, till it is paſt a doubt they were mad. On both theſe circumſtances may depend conſiderable ſatisfaction to the perſon bit; and it may not be improper to add, that there is abundant reaſon to ſuſpect that very few of thoſe who are bit by mad animals are liable to be affected by the *Hydrophobia*, or other fatal effects of the bite. This, however, is not intended to abate the care that is due on theſe occaſions, but as a proper antidote to that deſpondency which is often the conſequence of this accident.

In reſpect to our conduct in the preſent caſe, it is ſubmitted to your cenſure. We acknowledge we deſpaired of our patient's recovery. If we kept partly in the track our predeceſſors had recommended, as circumſtances admitted, ſo far we were juſtified: but we went further, we purſued ſuch means as we thought moſt likely to have one of theſe deſirable effects; to keep up the forces of life, by conveying into the habit every kind of nouriſhment by the paſſages left open, *viz.* the bowels and the ſkin, and thereby

thereby enabling Nature to ſupport the conteſt longer; or elſe, to calm and relax, and render the conflict at laſt leſs terrible to the aſſiſtants, and leſs painful to the ſufferer.

We thought ourſelves juſtified, from conſidering the ſtate of the pulſe, and other circumſtances, to take away ſome blood, and repeatedly. That we might not reduce the ſtrength beyond what appeared neceſſary, we choſe to order it to be taken from the patient ſtanding; becauſe, we were ſatisfied, he could not loſe ſo much blood in that ſituation as would be detrimental without fainting, much ſooner than he would have done in a ſitting or decumbent poſture.

ADDI-

ADDITIONAL DIRECTIONS

FOR THE TREATMENT OF

PERSONS BIT BY MAD ANIMALS.

1ſt, PREVENT the animal ſuppoſed to be mad from being killed, if poſſible, till it is paſt a doubt that by refuſing ſuſtenance in any form, and other circumſtances uſually accompanying this ſtate, it is evident the creature is mad. Let all poſſible care, however, be taken, in the mean time, that he be confined in ſuch a manner as to injure no other animal. This attention, though it does not contribute to the cure, it may to the comfort of the patient.

2d, Obſerve whether the wound is made through any covering, and of what kind; as much ſatisfaction may be afforded to the patient, if the wound was made through thick clothing or leather.

3d, Remove the ſlavered cloths as ſoon as poſſible, and waſh the wounded or bruiſed parts

parts with water; in which if a little ſalt is diſſolved, it can do no harm.

4th, Conſider in what manner the wounded part may be treated, ſo as to keep it diſcharging as long as poſſible. If in a fleſhy part, and the patient will ſubmit to it, exciſion of the wounded part is the beſt ſecurity from danger.

Where this operation cannot be admitted, the actual Cautery, the Lunar Cauſtic, a Veſicatory may be applied with advantage, according as the part, the age of the patient, and the ſituation may direct. In every caſe let the wound be kept open as long as it can be done conveniently. A ſmall quantity of gunpowder, a little moiſtened, ſpread upon the part, if only ſcratched by the teeth of the animal, or put into the wound if large enough to receive but a little, and then kindled with a lighted paper, will, perhaps, as ſuddenly, as eaſily, yet ſafely enlarge the wound, as can be effected by any other means, and occaſion ſuch a kind of wound as will not inſtantly be cloſed.

The

The choice of these several methods must be left to the operator. Wounds in the hands, feet, or face, will not admit of the injured parts being cut out so safely, as might be done on the muscular parts of the arms and legs.

The time, likewise, of keeping the wounds open must in some respect depend on their situation. To keep open a running sore for a long time on the face and hands would be difficult, and productive of various inconveniencies.

Of all the prophylactics yet offered to the public, experience has proved there is not one to be depended on; it may, perhaps, be worth while to consider in this place the means of prevention principally in vogue.

When a person is bit by a mad animal, the first thing usually thought of is, Sea Bathing. The party is sent to some bathing-place, where there are commonly persons employed in this business, who, by keeping the patient long under water, and dipping

him repeatedly, reduce him almoſt to a ſtate of ſuffocation. Some of the ſalt water gets into the *trachea*, more into the ſtomach, and proves ſometimes a briſk purgative. Here the proceſs ends, and the patient is deemed to be ſecure from any future accidents on account of the bite.

The reader will have obſerved in the preceding caſe, that the whole of this proceſs is founded on miſtake, and it is certain that divers who have undergone the utmoſt ſeverity of this diſcipline, have died of the *Hydrophobia*.

The *Pulvis Antilyſſus* of Dr. Mead has had no better ſucceſs, and is now almoſt wholly forgot.

No medicine, as a preventative, ſeems to have maintained its credit ſo long as that called the Ormſkirk remedy. It is called ſo from the name of a town in Lancaſhire, near which the gentleman lived in whoſe family the ſecret has been long preſerved, and from thence diſtributed with ſuch apparent

parent ſucceſs, as to be generally deemed infallible for preventing the Canine Madneſs. I am ſorry there are more inſtances to the contrary, than that which is related in the preceding account.

The Tonquin medicine, compoſed of Muſk and Cinnabar, has been equally unſucceſsful. All theſe different medicines have been employed by practitioners, and all of them have failed.

Dr. James, who had great credit amongſt ſportſmen, and great opportunities of obſervation, thought Turbith emetics and mercurials certain antidotes; but theſe, likewiſe, have had the ſame fate with others; they have been neglected, not becauſe their promoters were no more, but becauſe they were found to be inſufficient.

His practice, however, and ſome other publications, turned the attention of phyſicians to mercurials, and they have of late been conſidered as the moſt certain antidotes to the Canine Madneſs. We gave them a

ſhort, tho' ineffectual trial. Others have been more bold, but not more ſucceſsful. There is too much reaſon to diſtruſt their efficacy in preventing or curing the *Hydrophobia*.

Notwithſtanding theſe diſcouragements, there is one thing which ought to afford the ſufferers ſome conſolation; which is, that it appears very evident, that if no means of prevention were uſed, many of thoſe who are bit by mad animals, would never be liable to the fatal conſequences of Canine Madneſs.

On the other hand it is more than probable, from divers accounts, which have been publiſhed, that perſons of timid and anxious diſpoſitions, who have been bit by ſome animal, even without any proof of its being mad, have imagined themſelves affected with every ſymptom of canine madneſs they have heard of, deſcribed their complaints as ſuch, were treated accordingly, and cured of a diſeaſe that had no real exiſtence.

It

It is, therefore, a matter of no ſmall moment to the practitioner, as well as to the patient, to have all theſe circumſtances in contemplation; and whilſt the former is neglecting no means which either the experience of others, or his own judgment, have induced him to think are conducive to ſecurity, the patient ſhould be confirmed, by every juſt and reaſonable argument, in an opinion of their efficacy.

After taking this ſhort view of the means recommended to us as preſervatives againſt the fatal effects of this poiſonous bite, and having ſeen too much reaſon to conclude them ineffectual, it is with regret I acknowledge myſelf unacquainted with any method of treating the *Hydrophobia* more ſucceſsfully, or even of leſſening the diſtreſs with which it is accompanied farther than has been already propoſed.

The firſt ſymptom of the *Hydrophobia*, which is a dread of all liquids, cuts off in an inſtant a great part of the means of relief by internal means. It is with great dif-

ficulty that medicines of any kind, or in any form, after a day or two have elapſed, can be got down.

The caſe which Dr. Watſon and myſelf attended, concluded, like all the inſtances of the genuine *Hydrophobia* on record, fatally. Had we the ſame ground to go over again, for my own part, I confeſs I know not of a more reaſonable plan. I would not, however, diſcourage others from purſuing their own ideas: ſome fortunate event may, at length, make us better acquainted with the nature of this poiſon, and point out a ſpecific remedy.

Should another accident of the like nature occur, until we are directed to a more rational and ſucceſsful method, I ſhould ſtill be inclined to purſue a plan ſimilar to that which we laid down in our treatment of the caſe before deſcribed. Its baſis was, to prevent the loſs of ſtrength as much as poſſible, in order to gain time, and afford the beſt chance of relieving the patient. In this diſeaſe we are early precluded from the uſual

means of effecting this purpoſe, as the patient ſoon finds himſelf incapable of ſwallowing any kind of nutriment in a proper quantity, as hath been already mentioned.

Two methods, however, ſtill remain of aſſiſting the patient, though imperfectly. Firſt, by clyſters. By this means, a large quantity of aliment may be ſupplied. Broth, milk, eggs, in various ſhapes, may be exhibited in ſmall quantities, that they may be retained, whilſt larger promote their own rejection.

Secondly, by baths. It is probable that by this method large ſupplies of fluids may be introduced into the habit, by means of the abſorbent veſſels, placed on the ſurface of the body every where.

Whether any uſeful additions can be made to warm water can be determined only by experience. Perhaps broth, moderately ſalted, with the addition of aromatic herbs, might be uſed alternately, with warm water, to which may be added a handful or two

of that compoſition ſold by the perfumers under the name of *Pot Pourrie*, and a proportion of Bay Salt, ſufficient to make it nearly equal to ſalt water, or about twelve ounces to every four gallons.

Whatever bath is made choice of, the patient ſhould continue in it as long as it is eaſy to him, and in a degree of heat that he bears with pleaſure, perhaps from 80 to 86 degrees of Fahrenheit's thermometer. The patient may be wiped dry, put into a warm bed, a clyſter given of half a pint of broth, with a raw egg beat up in it; and both this and bathing be moſt induſtriouſly repeated.

From the trials made with opium, it does not appear, that this drug has had any beneficial effects. It is difficult to get it down in any quantity at the time we moſt want it, in any ſhape. By clyſters it may be given, had we any reaſon to conclude it would be beneficial. In regard to its external application I am perſuaded from experiments, that if the ſkin is whole, opium never produces any ſoporific effects.

Applied

Applied as a plaſter, or a cataplaſm, it will produce the ſame effect as any ſimilar plaſtick, ſemireſinous ſubſtance, and no more. In tincture, it will act as ſpirit would act, impregnated with ſuch a kind of ſubſtance, void of all anodyne quality, and in no other way. Half an ounce of opium ſoftened into the form of a poultice, and applied to the belly of a healthy new-born infant, did not produce the leaſt anodyne effect. The like trial has been made with Mithridate, Venice Treacle, and Laudanum, and with the like reſult. In a diſeaſe ſo ſwift in its progreſs, it is of conſequence to know what *will not be efficacious*. It compels us to look around for other auxiliaries.

If mercurials can be of uſe, it would ſeem that the ſteam of cinnabar would be worth a trial. By this means it would be practicable to impregnate the air in which the patient breathes, ſhould he be incapable of admitting the fume in the uſual mode, into the *fauces*, ſo as to produce the effects of mercury on the parts affected the moſt ſpeedily.

When

When the patient comes out of the warm bath, the mercurial ointment may be applied liberally. I am afraid it will be found as ineffectual as the other means hitherto made uſe of; but in caſes like this, it is better to try a medicine of whoſe efficacy there may be ſome doubt, than none at all.

In reſpect to bleeding, I have only one thing to obſerve. If the patient is bled ſtanding, till he ſhews a diſpoſition to faint, it may be done without hazard; it may abate a little of that inflammatory diſpoſition, which is the conſequence of continued irritation.

It would, perhaps, at length contribute to remove this uncertainty, if thoſe who are applied to on theſe intereſting emergencies, would conſider themſelves as obliged by the honour of their profeſſion, and the ties of humanity, to note with all poſſible preciſion and impartiality every incident in the progreſs of this diſeaſe; and whether they purſue the hints here ſuggeſted, or take

take up more rational ones from their own ſtore, would communicate the reſult to the public. By this method the field of conjecture would be contracted, and our ſucceſſors directed to new objects of inveſtigation. The reſult would be not leſs honourable to thoſe who engage in the ſearch, than beneficial to mankind in general.

XXII.

XXII. *Caſe of an* Angina Pectoris, *with Remarks* *.

IN the autumn of 1773, I viſited R. M. Eſq; a gentleman aged about fifty-eight, of a ſize above the middling, his complexion rather fair and ſanguine than ſwarthy, plump and full, diſpoſed to corpulency, but not ſo as to render him unfit for any kind of exerciſe.

For the moſt part he had enjoyed very good health during the greateſt part of his life, which was active, regular in common, temperate as to liquors, a good appetite, and accuſtomed to a plain but plentiful table, as I was informed by my friend and neighbour W. Fowle, who attended him as his apothecary, and gave me the following account:

" He was ſeized about the year 1770 with a remarkable giddineſs, which was at times extremely troubleſome to him, and never

* From Medical Obſervations and Inquiries, vol. v.

left

left him entirely, though the intervals of the ſeverer attacks were frequently pretty long. For this complaint he had at firſt a bliſter on his head, which was kept open ſeveral months; and afterwards had one upon his back, which was alſo kept open a good while. He took at different times valerian, with ſalt of hartſhorn, *lac ammoniacum*, decoction of the bark with valerian; but, excepting the bliſters, nothing appeared to give him any material relief.

"In July 1773 he was attacked with a ſpaſm in the breaſt, which at firſt affected him only when he uſed exerciſe, and chiefly when he walked up hill. I deſired him to apply a ſmall bliſter to his ſtomach, and to take a quarter of a pint of buckbean tea twice a-day. The bliſter gave him great pain, and he was obliged to let it heal very ſoon. The buckbean tea did him no good. I then gave him the gum-pill and guaiacum, mixed up with *Balſ. Peruv.* He took the pills morning and evening, and waſhed them down with the camphorated julep, to which was added ſome ſimple tincture

tincture of valerian. Theſe medicines at firſt appeared to do him ſome good; but the diſeaſe ſhortly after returned with greater violence, when you was conſulted; and he died the 10th of May following."

I ſoon found there was too much reaſon to ſuſpect this diſeaſe was of that kind which is ſo fully and judiciouſly deſcribed by Dr. Heberden, in the ſecond volume of the Medical Tranſactions, a diſeaſe which I had too often met with; as it terminated for the moſt part fatally, and without its being in my power in one ſingle inſtance to learn from diſſection the ſeat of it, or to acquire any ſatisfactory information of its nature, from the moſt attentive recollection of the ſeveral ſymptoms.

It was in the evening when I ſaw the patient; and at that time he was free from any complaint, as he ſat ſtill. His heat moderate; his pulſe ſufficiently full, but for the moſt part irregular; his appetite good, and the diſcharges as they ought to be, only rather diſpoſed to coſtiveneſs.

He

He complained that his giddineſs was ſtill troubleſome at times; but that a diſorder, which frequently affected his breaſt, eſpecially on motion, and occaſioned much difficulty in breathing, gave him the greateſt uneaſineſs.

That in walking, if he either went up the ſlighteſt acclivity, or endeavoured to walk faſter than a certain pace; or if the wind was high, and met him as he walked even moderately; he was obliged to ſtop. He deſcribed it as a kind of ſtricture ſurrounding his cheſt, principally in a line with the *mammæ*, in ſuch a manner as to render it impoſſible to take a ſtep further without the hazard of immediate ſuffocation; a ſharp, pungent pain moſt particularly affecting the parts under the left breaſt, extending itſelf upwards on that ſide, and down the inner part of the left arm, to the elbow. Theſe ſymptoms, on turning from the wind, and ſtanding ſtill a few ſeconds, went off, leaving only the remembrance of their ſeverity, and a caution to proceed more deliberately.

The

The weather ſeemed to have ſome little effect upon him; a ſharp, keen air, or a high wind, or an extreme of any kind, affecting him very ſenſibly.

Going up ſtairs, and getting into bed, were great difficulties to him: nor did the ſtricture always ceaſe upon lying, or rather ſitting down in bed. It would ſometimes continue to haraſs him for an hour or two, and frequently returned about one or two o'clock in the morning, or at day-break.

He had felt occaſionally a ſmart and ſudden fit of pain in one foot, with ſome ſmall ſwelling, apparently of the gouty kind. His age, his manner of living, his general habit, ſeemed to favour an opinion, that his diſorder might partake of this malady. He had found too, that eructations often terminated his pains; and that nothing facilitated theſe diſcharges ſo much as ſimple peppermint-water: it was always by him in the night, and gave him eaſe even when a reaſonable doſe of a paregoric had been given without benefit.

Willing

Willing to hope that this caſe might partake conſiderably of a gouty nature, and conſequently that there was ſome chance of relieving it, I propoſed ſuch a plan both of diet and medicine, as might tend to enable the conſtitution either to diſcharge the gouty matter through the emunctories, or to throw it upon the extremities: to abſtain from every thing heating, not however to drink much leſs wine than uſual, and to obſerve caution in reſpect to quantity of proper food. Sometimes the diſorder ſeemed to be leſs ſevere; but no laſting advantages were gained: at length recourſe was had to an anodyne at night, which was repeated either in the night, or towards morning, as the conſtrictive exacerbations required. Twenty-five drops of *tinct. theb.* with a like quantity of *vin. antim.* at night, and ten drops of the ſame tincture in a little draught early in the morning, procured for a conſiderable time the appearance of much benefit. This however was not laſting; upon any little exertion of muſcular force, the diſorder ſtill diſcovered itſelf, and with as much violence as at firſt.

With a view to aſſiſt his general health, which ſeemed now to be much affected by the continuance of theſe complaints, he drank the Bath-water at Bath ſeveral weeks. Some more pain was obſerved in one foot, whilſt at Bath, and a ſwelling ſufficient to ſhew it was the gout. His health was ſomewhat improved by the journey and the waters; but they did not alleviate the original pain in his breaſt, which ſometimes came ſo ſuddenly and violently, towards the mornings eſpecially, as to alarm thoſe about him with fears of his immediate death, and which at length happened very ſuddenly, in the morning.

The family condeſcended to have him opened, which was performed by my ingenious friends the Langleys, father and ſon, judicious ſurgeons in the neighbourhood, from whom I received the following account, not being able, through ſome prior engagements, to be preſent at the diſſection.

"On inſpecting the body of R. M. Eſq; the parts were as follows:

In

In the THORAX.---The *mediaſtinum* much loaded with fat; a quantity of water under the lungs, about a quart on each ſide, thin and tranſparent, nearly reſembling urine. The lungs in good condition, except on the upper part of the right-ſide, there was an adheſion to the *pleura*, of about an inch, but without inflammation. The *pericardium*, on the outſide, loaded with a large quantity of ſuety fat, but more ſo on the lower ſide, next the diaphragm. The lymph, in the inſide, about the uſual quantity. The heart of the uſual ſize. The auricles and ventricles with all the veſſels and valves perfect; not the leaſt oſſification or appearance of diſeaſe, except on the outward muſcular part, near the *apex*, a ſmall white ſpot, as big as a ſixpence, reſembling a cicatrix.

In the ABDOMEN.---The *peritoneum* perfect.

The *omentum* much enlarged and thickened, at leaſt ſix times its natural thickneſs. The fat of a yellow appearance, and much

firmer than uſual, very heavy, and the lower part adhering to the *peritoneum*.

The STOMACH.---In the inner coat, a good deal of inflammation, particularly about the valve in the *pylorus*.

The LIVER;---rather more florid without than uſual; on the back convex part of it was an unuſual prominency, near the ſize of an egg; but on opening it, no appearance of diſeaſe.

The GALL-BLADDER;---full, and much diſtended, but no ſtones."

The firſt caſe apparently of this nature that occurred to me, was above twenty years ago; and the perſon is now, or lately was, living, and in good health; not having of late years, ſo far as I have heard, been attacked with this complaint. He was at that time about thirty years of age, and the youngeſt ſubject I have ever ſeen affected with this diſorder, which is ſo ſtrongly marked,

marked, as cannot eaſily be miſtaken for any other.

He was rather of a low ſtature than tall, a ſhort neck, ſtrong, temperate, and accuſtomed to regular, but not violent, exerciſe. Without any perceptible cauſe, he found himſelf ſometimes obliged to ſtop ſuddenly, if he was either walking up hill, or a little faſter than ordinary, or if he was riding a very briſk trot. Moderate motion of any kind did not affect him. Finding the diſeaſe increaſing, he applied to me for aſſiſtance. He lodged at a relation's, in Cannon Street; from the end of it in Gracechurch Street to White Hart Court, where I then lived, is a very gentle aſcent; but in that ſhort ſpace he was obliged to ſtand ſtill ſeveral times, to recover from a kind of ſtricture about his cheſt, as he deſcribed it, that threatened him with death, if he had been forced to go forward. He had juſt dined, and this had added to his difficulty, having himſelf obſerved, that he ſuffered leſs in motion when his ſtomach was empty. From the deſcription of the pain, its courſe, which was acroſs

the breaſt, and down both arms to the elbows, I could not forbear ſuſpecting the ſixth pair of nerves and their numerous connexions were the ſeat of this diſeaſe; that ſome irritating cauſe, excited by motion, affected them, and that the parts they were principally diſtributed to ſuffered in conſequence. The lungs did not appear to be affected; no preceding cough or ſymptoms of inflammation, no catarrhal defluxion, no appearance of a dropſy of the thorax, nor any fugitive acrimony, that ſeemed capable of producing ſuch ſenſations.

I recommended a ſparing diet, to keep the bowels open, to uſe moderate exerciſe on horſeback; not to take long or fatiguing walks. He took ſome pills of ſoap, *pil. gummoſ. cinnab. nativ.* and a light chalybeate bitter for ſome months. After this, he went to Bath ſeveral ſucceſſive ſeaſons, and acquired his uſual health.

This is the only inſtance that has occurred to me of a perfect recovery from this obſcure, and too often fatal malady. Some have been much

much relieved for a conſiderable time, and I have heard nothing farther concerning them; but for the moſt part, if the diſeaſe attacks them late in life, the prognoſtic is unfavourable.

Perhaps it will be difficult to account for the ſymptoms attending this diſeaſe ſatisfactorily, from the appearances on diſſection. In a caſe not altogether diſſimilar in that diſtinguiſhing character, the conſtriction which the thorax ſuffers upon accelerated motion, and where there was reaſon to ſuppoſe from the ſymptoms, that moſt of the thoracick and abdominal viſcera were in a morbid ſtate, nothing of this kind appeared on diſſection but a ſmall oſſification in one of the mitral valves of the heart, ſome additional quantity of moiſture in the *pericardium*, ſome in the cavity of the *thorax*, and of the *abdomen*; but the whole ſurface of the body was drenched, as it were in water; a general *anaſarca* covering both the trunk and limbs, with an utter inability to move without feeling a very ſharp ſtricture about the *thorax*.

This circumſtance induced me to requeſt the gentlemen, who opened the body, to attend to the condition of the heart, with all poſſible accuracy; and it appears from the preceding account, that nothing preternatural was therein obſerved, except on the outward muſcular part, near the *apex*, a ſmall white ſpot as bix as a ſixpence, reſembling a cicatrix.

Another circumſtance likewiſe induced me to inquire more particularly after the condition of the heart, which is, that I have very ſeldom met with this diſeaſe, but it was attended with an irregular and intermittent pulſe, not only during the exacerbations, but often when the patient was free from pain and at reſt.

No doubt, as there are no two human bodies preciſely alike, ſo there will be a great diverſity of ſymptoms; but there is one in this ſingular diſtemper, that, ſo far as I have ſeen, always marks it diſtinctly, which is, that ſharp, conſtrictive pain acroſs the breaſt, which always ſupervenes a certain degree of muſcular

muſcular motion, or whatever agitates the nervous ſyſtem.

For the moſt part the patient can walk a certain pace; if he exceeds this he is ſtopped: if he rides on horſeback it is the ſame; he can bear the horſe to walk, or trot; but if he quickens this motion beyond a certain point, he is obliged to ſtop. This is a conſtant attendant of all the caſes I have ſeen.

If we conſider the appearances of the preſent caſe on diſſection, we may perceive there are three which are evidently preternatural.

1. The quantity of fluid in the *thorax*.

2. The unuſual quantity of fat on the *mediaſtinum*, the *pericardium*, and *omentum*; and,

3. The ſcarlike appearance on the heart; the inflammatory appearance in the ſtomach, the little protuberance on the liver, do not amount

amount to any thing like cauſes productive of ſuch effects.

The conſequences of the increaſed quantity of a watery fluid, and fat in the breaſt, would doubtleſs be a more laborious breathing, from the lungs being confined within narrower bounds; but as theſe are permanent cauſes, the effects would be uniform.

It is very probable likewiſe, that a heavy pendulous *omentum*, ſo much increaſed by fat, would affect the action of the diaphragm very conſiderably, eſpecially in an upright and decumbent poſture, and would ſometimes impede, ſometimes accelerate, the motion of the blood through the heart and lungs conſiderably.

This preternatural fulneſs of the *thorax* and appendage to the diaphragm, though they aſſiſt us in part to account for the diſeaſe, yet ſeem not to be the only cauſes of this diſtemper. Time and future opportunities muſt inform us of the reſt.

However,

However, the facts diſcovered on the diſſection of this body evidently ſuggeſt to us a nearer approach to reaſonable indications of cure. On reviewing ſeveral of theſe caſes which have fallen under my obſervation, I think they have generally attended perſons who were diſpoſed to be corpulent; it is therefore not unreaſonable to ſuppoſe, that a part of their diſorder has ariſen from a depoſition of fatty matter in ſome parts of the *thorax*, which, by hindering the expanſion of the lungs, interrupting the natural free action of the heart, and perhaps by preſſing too much on ſome branches of nerves, diſtributed to theſe parts for the moſt neceſſary purpoſes of life, if they are not the principal, yet are they among the cauſes of this diſeaſe. The collection of water in the *thorax* contributes to the ſame end; and it is not improbable, but that in future diſſections, theſe three preternatural appearances will be found: the ſubſtance of the heart itſelf affected; water in the *thorax*; and an increaſe of fat both in the *thorax* and *abdomen*.

In

In attempting to cure this diſeaſe, therefore, it would ſeem not an unreaſonable plan, to endeavour to increaſe the thinner ſecretions, by the ſeveral means employed for this purpoſe, of the urine eſpecially.

And to prevent the accumulation of fat. This laſt may be a difficult taſk, and requires great circumſpection, conſidering the time of life to which this diſeaſe is moſt peculiar.

The caſe which I firſt ſaw, was in a perſon of that time of life, which would have admitted of ſuch a regimen as moſt commonly reduces the very corpulent to a competent ſize. Paſt the meridian of life, to conquer this tendency, might both be difficult and hazardous. An exact temperance in diet and in liquors ſeems abſolutely neceſſary towards the cure of this diſeaſe, not ſo far as to weaken, but ſo as to cut off all ſuperfluity of nouriſhment, as the redundancy would moſt probably increaſe the diſtemper.

A ſtrict vegetable diet reduces exuberant fat more certainly than any other means I know. A caſe or two of this kind may not perhaps be wholly foreign to our ſubject.

A country tradeſman, aged about thirty, of a ſhort ſtature, and naturally of a freſh, ſanguine complexion, and very fat, applied to me for aſſiſtance. He complained of perpetual drowſineſs and inactivity. His countenance was almoſt livid; and ſuch a degree of ſomnolency attended him, that he could ſcarce keep awake whilſt he deſcribed his ſituation. In other reſpects he was well.

I adviſed him immediately to quit all animal food, to live ſolely on vegetables, and every thing prepared from them, allowed him a glaſs of wine or a little beer occaſionally, but chiefly to confine himſelf to water. He purſued the plan very ſcrupulouſly, loſt his redundant fat, grew active as uſual in about ſix months. I recommended a perſeverance for a few months longer; then

then to allow himſelf light animal food once or twice a week, and gradually to fall into his uſual way of living. He grew well, and continued ſo.

A young unmarried woman, about twenty-three years of age, of a low ſtature, and very fat, applied to me for aſſiſtance in a great difficulty of breathing, ſomnolency, and incapacity for any exerciſe. It was a hardſhip to be obliged to go up ſtairs, and at laſt to croſs the floor of her apartment.

It ſeemed to me that mere obeſity was her principal malady: indeed ſhe had no other complaint but ſuch as apparently might be accounted for from this ſuppoſition. She was ordered to purſue a vegetable diet, and in the ſummer to drink the waters at Scarborough. She conformed to theſe directions, became more agile, leſs ſleepy, leſs averſe to exerciſe. She walked up the ſteps at Scarborough from the ſpaw, a taſk of no little difficulty to people much leſs encumbered. I urged a continuance of

the ſame diet: ſhe was diſſuaded from it by her friends, and died of fat in the twenty-ſeventh year of her age. She left permiſſion with her ſiſter, to be opened, if it was deſired: the caſe was too ſingular to be neglected: all the *viſcera* were perfectly ſound, but larded with fat beyond apprehenſion. In dividing the external teguments, we cut through $2\frac{1}{2}$ inches of fat. She died ſuddenly.

Some inſtances of a ſimilar nature, in which a vegetable diet has ſafely contributed to reduce immoderate corpulency, induces me to think that a prudent trial in the caſe I am treating of would be adviſeable. Perhaps a reaſonable uſe of wine, not a generous one, ſhould here be allowed, leſt the ſtrength ſhould be diminiſhed too much in proportion; and if the power of abſorption ſhould by this means fail, we may probably loſe more ground, by the increaſe of the *ſeroſa colluvies* in the cavity of the *thorax*, than what we gain by ſubtracting the fat.

All the means of increaſing the thinner ſecretions are evidently pointed out as neceſſary,

ceſſary, from this diſſection; and if to theſe we join ſmall doſes of chalybeates, or other medicines, and an abſtinence from animal food, ſo far as the patient's health, ſituation, and manner of life will admit of it, we are perhaps rendering all the reaſonable aſſiſtance we can, till future diſcoveries make us better acquainted with the real cauſes of this ſingular diſtemper.

XXIII.

XXIII. *Farther Account of the* Angina Pectoris *.

SINCE my former paper on this ſubject was delivered to the Society, I have had another opportunity of being informed by diſſection of ſome circumſtances relative to this diſeaſe, which are here ſubmitted to your conſideration.

H. R. Eſq. aged 63, a gentleman rather inclined to corpulency, but active, and of a very irritable habit, middling ſtature, and freſh complexion, employed in affairs that often required attention and confinement, writing eſpecially, complained to me three or four years before his death, that he often found a difficulty, or rather an incapacity, to walk up a moderate aſcent, eſpecially if he attempted to do it haſtily. I ſoon perceived that this obſcure diſeaſe, which had hitherto for the moſt part baffled all my endeavours to remove it, was taking place. I adviſed

* From the Medical Obſervations and Inquiries, vol. v.

great temperance and moderation in diet, in drinking, and application; to ride frequently, paſs his ſummers in the country, to ſhun every thing that would agitate his ſpirits, or depreſs them: a gentle laxative medicine, and ſtomach bitter to be continued for a fortnight, and occaſionally to be repeated, promoted his general health; and his own care contributed greatly to prevent the increaſe of this malady. In the ſummer of 1774, he ſpent a few weeks at Buxton, where he bathed and drank the water, and returned to town in better health than he had enjoyed ſome years before. Being much diſpoſed to flatulency, he now and then took a warm cardiac draught, which he found relieved him, and pretty often ſome aloetic pills, to prevent coſtiveneſs, but purſued no other plan of medicine, contenting himſelf with obſerving, and with ſome degree of attention, the general regulations I had preſcribed to him; and though it did not appear that much ground was hereby gained, the ſame conſtriction returning if he attempted any exerciſe beyond a certain point, which his own experience had taught him, yet he perceived

ceived no increaſe of the diſeaſe. He occaſionally conſulted me, but rather with a view to be confirmed in the plan propoſed to him, than with a hope of obtaining effectual relief, as he was very apprehenſive that he laboured under the diſeaſe which Dr. Heberden had ſo fully deſcribed.

On the 13th of March 1775, in the evening, in a ſudden and violent tranſport of anger, he fell down and expired immediately. His family were prevailed upon to allow the body to be opened, which was done the next day, by that very ſkilful and accurate anatomiſt, John Hunter, F. R. S. whoſe account is as follows:

The Appearances upon opening the Body of H. R. *Eſq.*

" The blood had ſettled very generally on the ſkin, appearing in dark purple ſpots.

In opening the cheſt, I found the cartilages of the ribs very much oſſified.

In the cavity of the cheſt I found a full quart of bloody ſerum.

The lungs were to all appearance ſound.

The heart to external appearance was alſo ſound; but upon examination, I found that its ſubſtance was paler than common, more of a ligamentous conſiſtence, and in many parts of the left ventricle it was become almoſt white and hard, having juſt the appearance of a beginning oſſification.

The *valvulae mitrales* had a vaſt number of ſuch appearances in them, and were leſs pliant than in a natural ſtate; but did not appear to be unfit for uſe.

The ſemilunar valves of the aorta were thicker than common, but very readily filled the area of the artery.

The aorta had ſeveral ſmall oſſifications on it, and ſeveral white parts, which are generally the beginnings of oſſifications, and which were ſimilar to thoſe found in the heart and *valves*.

The

The two coronary arteries, from their origin to many of their ramifications upon the heart, were become one piece of bone.

The abdominal *viſcera* appeared ſound, excepting a few ſmall ſtones in the gall-bladder.

On opening the ſkull, I found it very thick in many parts. Upon the forepart of the falciform ligament was a conſiderable oſſification, which lay between the anterior parts of the two hemiſpheres of the brain.

The ſubſtance of the brain appeared to be very ſound.

There was rather more water in the ventricles than is common at that age; and in general, there was more water about the brain than is uſually found.

The plexus-choroides had ſeveral pretty large hydatids in them, ſome as large as a pea.

The internal carotid and baſilary artery were beginning to oſſify.

There was rather more blood about the brain than uſual; but perhaps not more than what is common to thoſe who may be ſaid to die in health.

The blood had not in the leaſt coagulated in any part of the body, nor did it coagulate upon being expoſed, which is another cauſe for the appearance of more blood than uſual, and alſo perhaps for its ſettling ſo much on the ſkin."

This very accurate diſſection throws much light on the nature of the diſeaſe; and tho' perhaps it may not aſſiſt us in curing it, yet will enable phyſicians to give ſuch aſſiſtance and advice, as may contribute much to the cure of ſuch as are afflicted with this malady, and promote the continuance of their exiſtence.

The ſtate of the parts about the heart fully ſhews, that under ſuch circumſtances, it

it is impoſſible to bear with impunity the effects of ſudden and violent agitations, whether they ariſe from guſts of paſſion, or ſuddenly accelerated muſcular motion.

To propoſe ſuch a kind of diet as may be the moſt likely to prevent ſuch irritability. To recommend likewiſe attention to quantity. To be particularly abſtemious in reſpect to every thing heating, ſpices, ſpirits, wines, and all fermented liquors. To guard moſt ſcrupulouſly againſt paſſion, or any vehement emotions; and to make uſe of all the uſual means of eſtabliſhing and preſerving general health.

To mitigate exceſſes of irritability, by anodynes; or pains, if they quicken the circulation. To diſperſe flatulencies when they diſtend the ſtomach, by moderate doſes of carminatives, amongſt which, perhaps, ſimple pepper-mint water may be one of the ſafeſt, will perhaps be the means of continuing many a valuable life to his family.

And it is not improbable, but if on the firſt appearance of this ſtricture, eſpecially in an age not too far advanced, the plan propoſed might greatly retard the progreſs of this diſorder, by aſſiſting to reſtrain exceſſes of paſſion and anxiety, which perhaps contribute more to the increaſe of this diſeaſe, than a combination of all the other cauſes.

XXIV.

XXIV. *Farther Remarks on the Treatment of* Conſumptions, *&c* *.

To the MEDICAL SOCIETY in LONDON.

GENTLEMEN,

IN the laſt volume of your Obſervations, you were pleaſed to admit ſome remarks on the uſe of reſinous medicines, employed in the cure of pulmonary conſumptions ‡, and which ſeemed, in my opinion, to be rather injurious than uſeful. I take the liberty to lay before you ſome further remarks on the treatment of this diſeaſe; rather propoſing to myſelf the prevention of harm, than contributing much to the cure of this very dangerous malady.

It was there pretty ſtrongly urged, and cannot well be too often repeated, that if this diſeaſe has continued till the lungs are affected to a certain degree, all hope of a

* From Medical Obſervations and Inquiries, vol. v.

‡ See p. 373 & ſeqq. of this volume.

cure is vain: a doubtful, and often ſhort-lived truce is all that art can promiſe.

In this paper, I mean to ſubmit to your conſideration, and if you do not diſapprove them, to that of the Public, ſome reflections on the more capital medicines employed in the cure of this diſtemper;—the bark—elixir of vitriol—repeated bleedings—veſicatories; not omitting Briſtol water, and change of air and climate; exerciſe; with ſuch other obſervations relative to this ſubject as have occurred to me.

With this view I ſhall chiefly attend to the effects I have obſerved, and if I have formed any opinions upon inſufficient ground, I ſhall be glad to be ſet to rights; as I think there can ſcarcely be any thing more injurious to ſociety, than to propagate wrong notions reſpecting the treatment of diſeaſes; as they may chance to lead the leſs experienced to a precipice with his patient, where one of them may loſe his life and the other his reputation.

Of

Of late years the bark has been given ſo generally, and in caſes ſo remote from thoſe in which it was firſt uſed as a ſpecific, I mean intermittents of every ſpecies, that it is not to be wondered at, that it is often confided in, as a dernier reſort, in the pulmonary hectic.

The apparently regular paroxyſms of an intermittent, ſo conſpicuous in certain ſtages of this diſeaſe—regular cold fits, ſucceeded by great heat, followed by copious ſweats—a ceſſation of every violent ſymptom enſuing, naturally draw the attention of the practitioner to a remedy, which, under like appearances, had afforded the moſt beneficial relief.

The bark has been puſhed, in this ſtage of the diſtemper, in too many inſtances, with as much vigour as is neceſſary to conquer the moſt genuine autumnal intermittent—till both the patient and preſcriber were weary of the proceſs—the patient loathing the remedy, and the preſcriber finding it ineffectual.

But

But this is not the worſt: the bark is ſo far from curing the hectic ariſing from diſtempered lungs, that, according to the beſt of my obſervation, it not only takes up that time, which might probably have been better employed in the uſe of other medicines, but, for the moſt part, it aggravates the diſeaſe beyond remedy.

I have ſeen the bark given in almoſt every ſtate of the *phthiſis pulmonalis*, even in the firſt commencement, whilſt the breaſt was in pain, the cough dry and harſh, the pulſe quick and hard, and the heat conſiderable. What was the conſequence? frequently an *hæmoptyſis*, and all its worſt attendants; ulcered lungs, purulent ſpitting, colliquation, and death.

I have ſeen it given in moſt of the ſubſequent ſtages, often indeed with leſs appearance of injury, but at leaſt without benefit.

There are two cauſes of conſumptions, which often produce ſuch a ſimilarity of ſymptoms

ſymptoms to the genuine *phthiſis*, as ſometimes to have led me to make uſe of the bark in apparent tendencies to a genuine pulmonary conſumption, with advantage; and I think they may not improperly claim ſome attention from practitioners.

One of the cauſes is, the ſuckling of children longer than is conſiſtent with the mother's ability. This caſe occurs not ſeldom, among the middling and lower claſs of females of naturally tender and delicate conſtitutions. Prompted by maternal fondneſs, or a wiſh to diſcharge a duty they think they owe to their offspring, and ſometimes by narrow circumſtances, they give the breaſt to the child till their own ſtrength is impaired: in ſuch a ſtate of weakneſs, ſome ſlight cold brings on a cough; this is increaſed gradually, till it brings on the appearance, at length the reality, of the genuine pulmonary conſumption: here the bark given early, in moderate doſes, and merely as a tonic remedy, is often of excellent uſe. Many, I am ſatisfied, it has retrieved from deplorable ſituations; and under ſuch circumſtances

cumſtances a prudent trial may ſafely be made.

Another cauſe is, any weakening diſcharge either from abſceſſes, or from the greater operations of ſurgery; or from a copious and conſtant *fluor albus*, or ſimilar enfeebling evacuations. That the bark is, for the moſt part, of uſe in theſe caſes, when the lungs are not inflamed, is indubitable; and if they are ſo affected, and not beyond a certain degree, it is alſo efficacious in preventing the progreſs of this malady.

In phthiſical complaints, ſucceeding ſuch ſituations, a prudent trial of the bark ſeems neceſſary. Small doſes of the decoction, given either alone, or joined with the ſaline mixture, or ſuch other additions as the preſcriber may think proper, may be given: but if the breath becomes more tight and oppreſſed, the cough dry, the pulſe more quick and hard, and eſpecially if ſlight tranſitory pains or ſtitches about the *thorax* are more frequently complained of, a perſeverance in the uſe of the bark will increaſe the

the diſeaſe: and if ſuch ſhould be the appearances, in the progreſs of conſumptions, or ariſing from what cauſe ſoever, if the bark is accompanied with ſuch effects, it will be prudent to deſiſt from its uſe.

If, on the other hand, no pain, tightneſs, or oppreſſion, is perceived, and a manifeſt abatement of the ſymptoms appears, it will be right to proceed. But the exhibiting of this medicine requires a diſpaſſionate obſerver; and whoever wiſhes to make trial of it, ought neither to give it in the early inflammatory ſtate of this diſtemper; nor continue its uſe in any ſubſequent part of its progreſs, if it produces the effects above mentioned.

By its tonic virtues it will often enable nature to conquer many difficulties. I have ſeen it of uſe in promoting expectoration, where ſtrength was only wanting to perform it toward the end of peripneumonic fevers; but that it ſtops this diſcharge, changes ſlight wandering pains into fixed ones, and increaſes them with all their conſequences, I have

have been a witneſs too often, to admit of the leaſt doubt, in a variety of caſes.

It would be treſpaſſing too much on your patience to deſcend more minutely into the uſe and abuſe of this medicine, or the mode of exhibiting it; ſuffice it to ſay, that for the moſt part much harm or great good may be expected from it, and conſequently too cloſe an attention cannot well be paid to its operations by the preſcriber.

THE elixir of vitriol is often exhibited in conſumptive caſes, and may claim a conſideration in this place, and the more ſo as it ſeems to be frequently uſed with not leſs impropriety than the bark.

Perhaps a ſingle fact has contributed to raiſe the credit of this medicine in phthiſical caſes, without much regard to the ſtate of the diſeaſe, to a very injurious extent. It is ſaid that a perſon took, by miſtake, in a very advanced ſtate of a conſumption, at one doſe, half an ounce of the elixir of vitriol, inſtead of

of twenty-five drops, the doſe ordered by a juſtly eminent phyſician (Sir Edward Hulſe), and that the patient not only ſurvived the enormous doſe, but was cured by it.

Medicines, it is well known, that are highly proper in one ſtage of a diſeaſe, are equally detrimental in another. I have ſeen the elixir of vitriol in a competent doſe given in the inflammatory part of this diſtemper, while the pulſe was quick and hard, the breathing difficult, the cough frequent, with much heat, and very little expectoration; the effect was, an increaſe of every ſymptom, a ſpitting of blood, and all its conſequences.

In the latter ſtages of this diſeaſe, when a general tendency to putrefaction takes place, it cools and checks this tendency; it reſtrains the colliquative ſweats, and if the lungs are not injured paſt repair, it is a very uſeful auxiliary.

The compoſition, however, of this medicine may, perhaps, be found ſomewhat exceptionable

ceptionable for the purpoſes intended; the mineral acid combined with ſpices may ſeem to be the leaſt eligible. It is true, that aromatics are thought to poſſeſs an antiſeptic virtue; but where the putreſcence proceeds from matter continually mixed with the blood from broken veſſels, every thing irritating ſeems to be forbidden. Perhaps the *ſpiritus vitrioli*, in the tincture of roſes, or in any other proper vehicle, may be the moſt ſuitable method of exhibiting the mineral acid in ſuch diſeaſes.

Probably, there are very few medicines which do not undergo a conſiderable change in the ſtomach and offices of digeſtion; ſo that neither the ſuppoſed contractile tonic powers of the bark, nor the antiſeptic acid of the elixir, penetrate thoſe receſſes which are intended by the preſcriber to receive their efficacy. I ſuſpect that much good or harm is done by theſe medicines in the preſent caſe, by affecting the irritable parts of the ſtomach and firſt paſſages; and by this means I apprehend the bark oftener contributes to produce the ſymptoms we have com-

complained of, than by its action on the lungs, the ſeat of the diſeaſe. If we increaſe for a time the tonic force of the heart, and conſequently the greater flow of blood thro' the lungs, we are increaſing the malady for which we preſcribe it, let the manner of effecting this be what it may.

The action of allum, when a little of it is diſſolved in the mouth, may perhaps lead to explain this matter. It ſoon occaſions a kind of thrill through the whole habit; by which it may perhaps contribute to ſuppreſs hemorrhages, to cure obſtinate tertians, and produce other ſalutary effects, by acting upon the ſolids only; and the mineral acid in the elixir may, in like manner, ſo affect the organs of taſte and the nerves of the firſt paſſages, as probably to operate as powerfully in ſuppreſſing immoderate evacuations, by this means, as by any other we can conceive.

When, therefore, the veſſels act with ſufficient force, and are replete with juices, and when theſe ought to be prudently reduced, in order to give all poſſible eaſe to the lungs,

and conciliate a repoſe to them, as much as is conſiſtent with their offices; it ſeems highly improper to give medicines which, let their *modus operandi* be what it may, are known to poſſeſs a power of invigorating, and are generally made uſe of in all caſes for that purpoſe. And as there are many ſituations in the progreſs of Conſumptions, in which medicines producing ſuch effects, cannot but be injurious; it will be always neceſſary to regard theſe ſituations with all poſſible attention.

Of the uſe of Briſtol water in the cure of this diſtemper, ſo much has been ſaid and written, and ſuch are the diverſity of ſentiments concerning its efficacy, that it may ſeem to border upon raſhneſs to hazard an opinion concerning it. I ſhall ſuggeſt, however, the reſult of my own obſervations, and ſubmit moſt willingly to better information.

I have ſeen many perſons recover from pulmonary diſeaſes after drinking the Briſtol water, whoſe cure ſeemed to be doubtful from

from any other proceſs; this circumſtance, added to its general reputation in phthiſical caſes, has been a ſufficient inducement to me to recommend a trial of this water in the early ſtages of phthiſical complaints.

And here I would wiſh again to inculcate this remark, that it is before the approaches to a confirmed phthiſis, that patients ought to repair to Briſtol; otherwiſe a journey thither will be, not only without benefit, but will probably be detrimental.

Thoſe who can prevail upon their patients to go thither before the diſeaſe has affected the lungs, beyond a poſſibility of aſſiſtance from this or any other remedy, have often the ſatisfaction of ſeeing their patients return in good health; whilſt thoſe who delay the uſe of theſe waters to the laſt extremity, too often fall ſacrifices to their own irreſolution, and leave an impreſſion on the minds of others injurious to the water.

It may be ſaid that the journey, a better air, change of ſituation, and of objects,

have contributed to the patient's recovery: Be it ſo; theſe circumſtances are all of them conducive to health in every chronic diſorder. Perhaps, in none more ſo than in that which is the ſubject of theſe remarks. But why ſhould it be ſuppoſed that the Briſtol water has no ſhare in the recovery? Suppoſing the water to be void of any great efficacy, is it of no conſequence to phthiſical patients, to be obliged to be out of their rooms early in a morning, in the cool, freſh air? Are repeated draughts of a light, tepid water of no uſe in waſhing off impurities, allaying heats by mere dilution, and ſupplying the waſte of juices exhauſted by copious perſpiration? Hope itſelf is of vaſt moment in the cure of many diſeaſes; and it is perhaps not inconſiſtent with the duty we owe to our patients to promote it, whilſt we ourſelves retain a hope of their recovery.

But it ſeems to me that the water drank freſh at the pump, actually contains principles conducive to the recovery of patients affected with phthiſical complaints. What theſe principles are, may be difficult to define. The

The water ſeems to poſſeſs a ſlight calcareous ſtypticity, and perhaps the air it contains may alſo have an antiſeptic quality. In this place it may be enough to ſay, that I think the Briſtol water an efficacious medicine, and that I have often found it of ſignal benefit to conſumptive patients.

Were the annals of the Hot Wells conſulted it would appear, that thoſe records are againſt me. But whence does this ariſe? From two cauſes; firſt, from the patients themſelves, who, in theſe diſorders, being ſeldom apprehenſive of any danger, will not liſten to a preſcription which either thwarts their inclinations, or ſeems inconvenient. Secondly, from the phyſician too eaſily complying with theſe heſitations, and not urging the neceſſity of ſuch a journey, at a time when it might be advantageous. As the diſeaſe advances towards its laſt ſtages, then, perhaps, alarmed by their own fears, or the intreaties of their friends, they conſent to undertake a journey, which waſtes the ſmall remains of ſtrength they have, and brings to the Wells additional proofs of their

inability to remove diſtempers totally incurable. Hence it is, that the opinion of the faculty is ſo much divided, in reſpect to the uſe of theſe waters.

Change of air is of much conſequence in all chronic diſeaſes of the lungs, ſometimes even from good to bad. It is not ſeldom that we ſee aſthmatic perſons breathe more freely in the dampeſt confined parts of this metropolis than in the country, at leaſt I have met with many ſuch inſtances. In conſumptive caſes, however, the air of all large cities is found by experience to be particularly injurious. Whence this ariſes, is in this place unneceſſary to explain; the fact is indiſputable. When the phyſician adviſes his patient to a change of air, to point out the moſt proper change becomes an important object.

In the neighbourhood of moſt great towns in England, as well as London, there are places which have acquired a reputation amongſt the inhabitants for the peculiar healthineſs of their ſituation. I will ſuppoſe

poſe theſe ſituations are well choſen; that the ſoil is dry; no ſtagnant waters in the neighbourhood; properly ventilated, yet not expoſed to the keen north-eaſt winds; where it will be eaſy to find ſheltered walks, rides, and every invitation to be abroad in fit weather, without hazard from wet and cold. Such, I believe, from the few places I know of this kind, are thoſe ſelected for the retreat of conſumptive patients, in the vicinage of large towns and cities. And here it may not be improper to take a general view of ſuch as are recommended for the like purpoſe, in the neighbourhood of London.

The town is ſurrounded, almoſt, by a ridge of eminences, incloſing, beſides the city, a low plain to the weſtward, of conſiderable extent; on the north, Highgate, Hampſtead, and Kenſington Gravel-pits; on the ſouth-eaſt, Blackheath, Clapham, and Putney. The ſummits of theſe may be called, comparatively, high ground, and are very much expoſed to the ſharp north-eaſt and eaſterly winds.

To direct our patients to any of these places, early in the spring, whilst these winds are for the most part as stationary as the trade winds, seems to be exposing them too much to an air that is very unfriendly to such complaints.

The vales, especially to the south-east and west of London, as Camberwell, Peckham, the lower parts of Clapham, the drier parts of Lambeth and Battersea, Fulham, Chelsea, Brumpton, and Kensington, and other sheltered, dry places about the town, would in the spring undoubtedly be the most proper.

As the more temperate season advances, higher situations may be allowed; and it would seem as improper to send a consumptive patient in summer to the low marshy grounds on the banks of the Thames; amongst the gardeners grounds at Battersea, or at Fulham, abounding with the most putrid exhalations of manure and corrupting vegetables; as it would be to order them in winter to the top of Highgate or Hampstead-hill, or the bleaker air of Blackheath.

Islington,

Iſlington, the general refuge of the city, would be leſs exceptionable, was it not quite open to the keeneſt north-eaſt winds in the ſpring; and in ſummer to the ſmoke of the city, driven upon it by the ſoutherly winds.

Nor is it a matter perfectly indifferent whether we ſend our patients to the villages at the eaſt or weſt end of this metropolis; the ſouth or the north. The town itſelf is covered almoſt continually with an atmoſphere of ſmoke, embodied with other exhalations, ſo as to form a cloud more or leſs denſe, which is viſible at a great diſtance.

This vaſt body of ſmoke is ſeen to extend for ſeveral miles beyond the limits of the city and its ſuburbs, and is driven by the winds that prevail in the ſeveral ſeaſons, according to their direction. In the ſummer ſeaſon, for inſtance, whilſt the ſoutherly winds prevail, this denſe body is driven to the north and north-eaſt parts of the environs, and covers the herbage, the trees, and every thing, both living and dead, with black penetrating ſoot. In the winter and ſpring, while

while the northerly winds prevail, the oppoſite villages on the ſouth-weſt and weſt ſide of London receive this thick atmoſphere; but with this moſt remarkable difference, the winter winds paſſing through this warmed atmoſphere, loſe no ſmall part of their rigorous effects; they are ſoftened by it, and are proportionably leſs injurious to animals, and even to plants; for vegetation is much earlier in general to the ſouth and ſouth-weſt of London, than on the oppoſite extremities.

I have ſeen the double bloſſomed almond tree in bloom at Chelſea, ſooner by twelve days at leaſt than any where to the north or eaſtward of the town in ſimilar ſituations. It ſeems therefore neceſſary to conſider the ſeaſon and ſituation before we fix the abode of conſumptive patients, to whom it is not merely ſufficient to adviſe them to go into the country; they muſt be aſſiſted alſo to determine upon a proper place and proper conduct whilſt they are there. They muſt have had but little experience, who are not perfectly ſatisfied, how little ought to be left

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to the diſcretion of the ſick, in moſt diſeaſes; to the conſumptive eſpecially, in reſpect to their conduct. I have known divers inſtances of perſons who have gone into the country, in conſequence of their phyſicians advice in ſuch caſes, and have had ſo little diſcretion, as to ſleep with the windows of their chambers purpoſely left open, for the benefit of the air, in the moſt inclement part of the ſpring. The conſequence was, that in a few nights the malady was increaſed beyond the power of art to relieve it. A phyſician, therefore, muſt deſcend to the minuteſt particulars in his directions.

If an attention to circumſtances like theſe is neceſſary, to enable us to determine upon the choice of a proper reſidence in our own neighbourhood, how much greater muſt be our difficulty, when we propoſe to them a migration to the continent of Europe!

But before I enter upon this ſubject, it may not be improper to ſuggeſt ſome hints, relative to the different parts of our own country.

Briſtol

Briſtol will naturally claim our attention, in the firſt inſtance, when change of air is recommended, as in the neighbourhood of that place there are two great advantages, the water and a good air.

But if, from any particular diſlike, or other more ſubſtantial reaſon, this is not complied with, perhaps a journey would be much more advantageous than a fixed reſidence in any ſpot, however healthy. I ſhall only add, that a journey is always preferable to an equal number of miles rode over in one and the ſame tract of country.

In the ſpring this journey ſhould be to the ſouthward; to the weſtern counties;—or the ſea coaſts; and in the ſummer, to the northward, or to Wales:—the cooler parts of Great Britain;—Buxton or Matlock, or where any ſimilar water is to be met with, ſeems adviſeable. To meet the advancing ſpring, to return from the approaching winter, and by theſe means to avoid the ſeverity of cold, ſo injurious to tender breaſts, is the evident rule of conduct in ſuch caſes.

If

If it requires ſome conſideration, a knowledge of places in detail in this country, nay, even in the environs of London, to determine with propriety on the choice of places for the retreat of invalids, what muſt be our difficulty when called upon to fix the route and reſidence of a conſumptive patient, who ſeeks an aſylum on the continent!

And here I cannot but lament the want of an inſtitution, which, at no great national expence, might be attended with vaſt national advantages. Was a phyſician, or ſome medical perſon, to be placed in the ſuite of every Britiſh ambaſſador, envoy, or reſident, we ſhould ſoon be informed, and with ſome degree of certainty, of the proper places to which we might ſend our patients with the greateſt proſpect of ſucceſs. Neither the partial opinion of the patients who have reſided at different places, nor the tranſient viſits of the moſt obſerving travellers, nor even the obſervations of ingenious, ſenſible phyſicians themſelves, without a longer reſidence in the place than falls to the lot of moſt of them,

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can enable us to judge with accuracy of their comparative advantages.

The ſouth of France, Italy, Portugal, I mention them in the order they are uſually propoſed to us, are the places of general reſort.

Wherever the winter is ſhorteſt, the leaſt ſevere, and the leaſt changeable, every thing elſe being alike, is the moſt adviſeable. To which may be added likewiſe, the place of the moſt eaſy acceſs. Thus, for inſtance, Portugal, by ſome, would be ſtrongly objected to, on account of the ſea-voyage; whilſt others, perhaps, would chuſe it for the ſake of this eaſy conveyance. But if there be juſt reaſon to give one place in the neighbourhood of London, and within the compaſs of a very few miles, the preference to another, the difficulty of giving advice in this caſe, with the preciſion we could wiſh, is too apparent; and it muſt remain ſo, till further obſervations enable us to form a better judgment on this ſubject.

Of all the places we are acquainted with, perhaps the iſland of Madeira enjoys the moſt equal temperature; but the voyage and other circumſtances attending it, afford very formidable objections.

Nice has of late been the general retreat of the Engliſh conſumptive patients. Some places in the neighbourhood of Marſeilles are alſo well ſpoken of. The neighbourhood of Naples in Italy is alſo much commended; and in Portugal, the vicinage of Liſbon, and Cintra, a pleaſant ſpot, not far from that capital. In all theſe places regard ſhould be had to ſituation; that it may be dry, near no ſtagnant water, not environed with thick woods, where the water is good, and the air free, but not ſtormy and impetuous.

To thoſe who object to the continent, a trial of the weſtern counties of England may be properly recommended: Should it not prove ſalutary, the paſſage by ſea to Liſbon from thence is, for the moſt part, both ſafe and ſhort. Even ſea-ſickneſs is often beneficial to the conſumptive, as well

as the ſea air. Impaired digeſtion, and, not ſeldom, a redundancy of bile attend theſe caſes; and perhaps repeated mild emetics, ſufficient to cleanſe the firſt paſſages, would often be of uſe.

One great misfortune attending theſe migrations, whether from London or other great cities, into the neighbouring country, or to Briſtol and other places in this kingdom, or to the continent, is, that, for the moſt part, they are undertaken too late, both in reſpect to the progreſs of the diſeaſe, and the ſeaſon.

Inſtead of removing at a time when a change of air and its conſequences might prevent the moſt ſerious evils, they are in haſte to quit their country, when perhaps neither this can be beneficial, nor is the ſeaſon for a journey a proper one.

It ſeems too often to be the fate of conſumptive patients, to do that laſt, which they ought to have done firſt; and by this prepoſterous conduct, ſhorten their own lives, and afflict all who have any regard for them.

them. It happens not ſeldom, that when their phyſicians and their friends have in vain urged their departure at the proper ſeaſon, they have reſolved to ſet out on the moſt fatiguing journies in the depth of winter; by which they are expoſed to every kind of inconveniency and hardſhip: if they eſcape with life, they aggravate their diſeaſes, and too frequently die in the journey, martyrs to their own indiſcretion.

The benefit of exerciſe in this diſtemper has been ſtrongly urged by many writers. As it has been treated of ſo pertinently by Doctor Dickſon, one of your colleagues, I ſhall ſay little more on the ſubject. It is however evident, that this great auxiliary may be abuſed, and that conſumptive patients may uſe it improperly. They ride out when they ought not, and increaſe their diſeaſe through indiſcretion. Moderate journies, in temperate ſeaſons, and as much as may be on horſeback, are of excellent uſe in conſumptive caſes, obſerving, at the ſame time, exact temperance, both in reſpect to diet and liquors. To ride out early in the

ſpring, in very ſharp, or in damp, cold, and foggy weather, and at unſeaſonable hours, as, early in the morning, or late at night, is moſt certainly prejudicial.

Repeated bleedings, in ſmall quantities, are conſidered in theſe caſes as highly advantageous. They are ſo; and yet it is poſſible to carry this point too far; a conſtitution apparently abounding with blood—the blood when emitted extremely ſizy—much pain in the breaſt—and an abatement of every ſymptom enſuing, are juſt motives to proceed. In ſuch caſes bleeding is undoubtedly proper, and to be repeated ſo long as the like effects enſue, and health is reſtored.

But in very delicate conſtitutions, and where the pulſe may be quick, with ſome degree of fulneſs, and the blood laſt drawn conſiderably ſizy, it may not be of the like advantage.

I do not think the appearance of the blood alone, though it may appear to be much inflamed, is alone a ſufficient reaſon for bleeding.

ing. All other evidence ſhould be called in to aſſiſt us in determining upon it; the patient's age, ſtrength, habit, uſual evacuations, and ſtate of the diſeaſe. I mean only to ſuggeſt care; not to diſſuade from the operation: bleeding carried to exceſs, even in ſmall quantities, is capable of producing various ill conſequences.

It may not be improper in this place, perhaps, to take notice of a circumſtance which often happens in conſumptive caſes, and which as often claims the anxious attention of ſome of their friends.

It is well known that young delicate females, from the age of 15 or 16, and upwards, are often ſubject to this diſtemper. When it has advanced conſiderably, the menſes, if they have made their appearance, moſt generally ceaſe. This alarms their female friends, and they call upon the phyſician to uſe his utmoſt endeavours to aſſiſt in this point, believing this ceſſation to be the cauſe of the complaint. Induced by theſe ſolicitations, medicines have ſometimes been adminiſtered,

ſtered, that, without obtaining this end, have tended to aggravate the diſtemper. This deficiency is often of no real diſadvantage in theſe caſes: in many it would be injurious, by leſſening the ſtrength, which is already inſufficient for the purpoſes of life. Even ſmall bleedings, at the regular periods, have often done more harm than good. A ſudden ſuppreſſion may require bleeding; but when the evacuation fails through want of ſtrength and poverty of blood, it increaſes the diſeaſe.

Drains are alſo deemed to be of great uſe in the cure of diſorders of the breaſt. Iſſues, ſetons, bliſters, both temporary, and, as they are ſtyled, for want of a more juſt epithet, perpetual, are ſtrenuouſly recommended. I confeſs I have but little experience to alledge, either for or againſt theſe kinds of applications: whilſt I pay great deference, not only to the experience of my brethren of the faculty, but even to their opinions, they will not wiſh me to give up my own implicitly.

It gives me ſome degree of firmneſs in proſecuting any meaſure, whilſt I can perceive ſome relation between the cauſe and the effect. When I diſcover that a phthiſical patient is deſcended from parents who have been ſubject to cutaneous, or ſcrophulous diſeaſes, or that they have had the like themſelves; that ſome iſſue has been ſuddenly ſtopped; ſome eruption diſappeared; and that the breaſt was ſoon after attacked, it ſeems immediately neceſſary to ſubſtitute an artificial drain, and, perhaps, as near to the part that was the ſeat of theſe diſorders, as conveniency will permit. I believe it happens not ſeldom, that very dangerous attacks upon the breaſt are made by the retroceſſion of ſuch impurities; and that in ſuch caſes theſe auxiliaries ought eſpecially to be recommended. But as conſumptive complaints exiſt in many conſtitutions, in which it does not appear that they proceed from, or are increaſed by, any ſuch retroceſſions; in ſuch caſes to preſcribe iſſues or bliſters, ſeems to be inflicting a certain pain, or perhaps a grievous inconveniency, to obtain a very uncertain advantage.

In my former paper I omitted to take notice of one medicine, which I have ſeen made uſe of too frequently in the treatment of this diſtemper; the oxymel of ſquills. There is ſcarce a circumſtance in the whole courſe of this diſeaſe, in which one of the moſt powerful expectorants can be of uſe; our utmoſt endeavours ought be exerted, to cool, to abate inflammation, and to remove every cauſe of irritation to the lungs. Under ſuch circumſtances, to give a medicine the moſt irritating of all others, ſeems highly improper.

Hitherto no mention has been made of the uſe and abuſe of a milk diet in this diſtemper. It may, however, be remarked, that there are conſtitutions in which this moſt excellent nutriment ſeems to diſagree; a proneneſs to generate bile, or too ſtrong a tendency to aceſcency from weak organs of digeſtion, both require the phyſician's attention. Whey, either from cows or goats milk, would probably agree beſt with the former; and lime-water, added to the milk, would counteract acidity.

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There is one uſual addition made to milk, which I think ſhould either be totally proſcribed, or the moſt expreſs directions given concerning it: I mean the common addition of rum or brandy to aſſes or cows milk. Theſe have done more miſchief to conſumptive patients, than any but phyſicians can conceive. Theſe additions are moſtly committed to the management of ſervants: theſe, for the moſt part, think every thing of this nature cordial; an idea they annex to growing ſtrong; and therefore too often give liberal doſes. Ardent ſpirits not only heat, but coagulate milk, added beyond a certain quantity; by which means the milk diſagrees, and the ſpirit augments the diſeaſe.

To enter minutely into the various other circumſtances relative to this diſeaſe, would be encroaching too much on your plan: permit me, however, to add, that to prevail upon the ſubjects of it, early to abſtain from all animal food, all ſpirituous and fermented liquors; to ſubſiſt entirely on milk, fruit, vegetables, and things prepared from them; to quit the air of populous towns and large cities;

cities; to ſhun all occaſions of anxiety, as well as fatiguing diſſipation; to be regular in their hours; riſing early, uſing moderately ſuch exerciſe as is ſuited to their ſtrength, and changing the air as far and as often as their conveniency will permit; is to render them the moſt eſſential ſervices in our power. Medicines will then more efficaciouſly contribute to abate the fever, mitigate the cough, and contribute to reſtore that ſtrength and vigour which has been waſted by diſeaſe, and their own inattention.

XXV.

XXV. *Obſervations on Diſorders to which* Painters *in* Water-Colours *are expoſed**.

To the MEDICAL SOCIETY.

GENTLEMEN,

I HAVE met with divers inſtances of perſons, employed in painting with water-colours, who have been violently afflicted with that diſeaſe, which is ſo generally known by the name of *colica Pictonum*, or the dry belly-ach; and who have been ſeized with that train of ſymptoms which uſually attend this diſeaſe, and even with that ſpecies of *paralyſis* which is often the companion of the moſt violent and advanced ſtages of it.

As ſome of the firſt caſes that occurred to me happened in autumn, I attributed them to the uſual effects of the ſeaſon; a diſpoſition to bilious diſorders in every degree.

Reflecting on theſe caſes, I found that ſeveral of the inſtances I had met with, who were ſo affected, both men and women, em-

* From Medical Obſervations and Inquiries, vol. v.

ployed themſelves in painting with water-colours, and were likewiſe ſtudious, and eminent in the reſpective branches of their profeſſion.

This led me to conſider their occupation more attentively, in order to diſcover, if poſſible, the cauſe of theſe complaints, and the means of preventing or curing them with more certainty and expedition.

The pigments they make uſe of are, for the moſt part, prepared from minerals, and many of them of a poiſonous nature; white lead, red lead, vermilion, verdigriſe, orpiment, calcined ſmelts, and other ſubſtances of a deleterious kind, form the baſis of moſt of their colours.

It is not an unuſual thing, nay, it is too frequently the practice of many of theſe artiſts, whilſt they are ſtudying their ſubject, to have the point of the pencil between their lips, and whilſt they are faſhioning it to their purpoſe, are inſenſibly ſwallowing, tho' in a ſlow unheeded manner, the noxious par-

ticles of mineral poiſons, whoſe effects will be proportioned to the quantity thus inſenſibly taken in, and the delicacy of the conſtitution. It is ſeldom that the robuſt apply themſelves to this ſedentary occupation.

A young ingenious female artiſt, about 19 years of age, had frequent attacks of this diſeaſe. She ſtudied much, uſed very little exerciſe, and by theſe means became more diſpoſed to ſuffer by this unheeded poiſon.

At length ſhe had a violent putrid fever, attended with the moſt ſingular appearances I ever met with; one of which was, a kind of *deſipientia* that continued for weeks after the fever left her, with total loſs of ſpeech; inſomuch that when ſhe had recovered her faculties ſo far as to know her wants, ſhe was long unable to expreſs them but by writing. To this was added a moſt exquiſite pain in the ſoles of her feet, for many weeks, which prevented all exerciſe, and thereby retarded her recovery.

At length ſhe grew better, ſat down to her favourite

favourite employment, and was frequently ſeized with a violent bilious colic, with its uſual conſequences. Emetics, purgatives, and the common proceſs in theſe caſes, removed theſe complaints; but her hands grew feeble;—ſhe became irregular, leucophlegmatic, and unable to purſue the employment ſhe was devoted to. At length, however, ſhe recovered a moderate ſhare of health, and being made ſenſible of the probable cauſe of her indiſpoſition, ſhe ſcrupulouſly avoids the practice that brought on theſe complaints, and enjoys better health.

This and ſome other inſtances that happened about the ſame time, to perſons in the ſame occupation, induced me to think theſe diſorders were principally owing to their ſwallowing, without thinking of the conſequence, ſo much of the deleterious colours, as thoſe unavoidably muſt do who accuſtom themſelves to faſhion the point of the pencil between their lips.

In conſequence of theſe reflections, I have deſired ſuch artiſts as I have been acquainted with,

with, to find ſome other means of performing this operation; as the colours, being many of them of a poiſonous quality, would, ſooner or later, ſubject them to very grievous ſufferings, and perhaps, in time, to the total loſs of the uſe of their hands.

I do not preſume to propoſe any better method of curing this diſeaſe, than that which has been propoſed by the writers on the *colica Pictonum*. But when the vomitings are abated, copious diſcharges by ſtool procured, and the functions of all the bowels, in degree, reſtored to their uſual ſtate, I know of nothing that ſo effectually contributes to reſtore the uſe of the limbs, when impaired by theſe cauſes, as the liberal and conſtant uſe of the *tinctura guaicina volatilis*. It may be given to ſuch a quantity as may be ſufficient to keep the belly gently open, mixed with a little common ſugar or honey, and then diluted with any weaker mucilaginous liquor, as thin gruel, or barley water, or marſhmallow tea.

Being fully convinced that many perſons have

have ſuffered, and are ſtill liable to ſuffer, from this unſuſpected cauſe, I need not ſuggeſt to you, that could theſe ingenious artiſts be, by any means, appriſed of the danger they are expoſed to by ſuch practices, it might ſave them much trouble and expence, and continue them longer in a condition to ſerve themſelves, their families, and the public.

I mentioned that the patient, whoſe caſe I briefly deſcribed, ſuffered greatly from a ſevere and unremitting pain in the ſoles of her feet, after the fever had left her. I thought myſelf happy that I had directed no applications to be made to the feet, neither bliſters, warm plaſters, nor cataplaſms, though the nature of her complaints often induced me to conſider how far they might afford a proſpect of relief. I ſhould, perhaps, have attributed her ſufferings to theſe applications.

I almoſt ſuſpect they were the effects of ſome poiſonous quality of the paint, and eſpecially of the arſenical kind, from the following circumſtance:

When

When that celebrated medicine called *Plunket*'s was in uſe, about 15 or 20 years ago, for the extirpation of cancers, I met with the like pains in the feet, where that medicine had been plentifully and repeatedly applied for the extirpation of cancerous tumours; and it was generally apprehended that white arſenic was a principal ingredient in this compoſition. It is certain, however, that many of the pigments are of an arſenical origin, that others are preparations of lead and copper, all of them noxious in a high degree, and never fail to produce the worſt of conſequences, when they are received into the human body for a long time together, even in the minuteſt quantities.

There is indeed a pain in the ſoles of the feet, which I do not recollect ever to have ſeen remarked by any writer. It is almoſt the conſtant companion of dram-drinking, and in women eſpecially. Having met with it in too many inſtances of this kind, it affords me but too juſt apprehenſions of the nature of the malady, when a conſtant burning

heat in the ſoles of the feet makes a part of the patient's complaints.

It is not improbable but that many diſeaſes affecting very young children may be aſcribed to a cauſe which I am obliged to Dr. Heberden for ſuggeſting to me. Many of their play-things are coated with paint, a great part whereof is white lead, covered with a ſlight varniſh. Children are ſeldom content with holding theſe painted, poiſonous toys in their hands; they often thruſt them into their mouths, and the varniſh being eaſily worn off, moſt probably ſo much of the paint is ſwallowed as to become the ſource of complaints, which prove the more obſtinate, as the cauſe is, in general, ſo little ſuſpected.

Accidentally mentioning this ſubject to Baron Dimſdale, he informed me of a caſe that had fallen under his own notice, and of which, at my requeſt, he drew up the following deſcription:

" In

"In November laſt I was called to a boy of about eight years old, ſmall of his age, but naturally lively and healthy. The account I received was, that he had for ſome time paſt been evidently declining in his health, complaining of pains in his belly and ſtomach. His apothecary had treated it as a worm caſe, and had given him a variety of evacuating medicines, particularly of the mercurial kind, without gaining any ground; on the contrary, the boy grew indolent and feeble, and had an obſtinate coſtiveneſs: on being deſired to uſe exerciſe, he complained of weakneſs and pain in his knees and ancles; his appetite, which uſed to be very keen, was almoſt gone; and his whole appearance languid and declining; his belly was rather large and tenſe, but not to a very remarkable degree.

"Particular inquiry was made reſpecting his diet, but nothing appeared, in this reſpect, improper or unuſual.

"Conſidering it, therefore, as an obſtinate obſtruction in the bowels, a variety of medi-

cines were tried, to keep the body moderately lax and open; but no ground was gained by theſe means; on the contrary, he declined viſibly, though ſlowly.

"Whilſt he was in this ſtate of danger and uncertainty, a relation of the family aſked me, whether he might not be injured by ſucking the pencils with which he painted. I inſtantly took the alarm, and, on enquiry, found that he had been extremely fond of colouring little pictures, and, for that purpoſe, was furniſhed with ſhells of paint, and pencils, with which he amuſed himſelf frequently; and his friends deeming it an inoffenſive amuſement, had not mentioned it to me. On examining further, I found, alſo, that he had got a trick of being almoſt continually wetting his pencils in his mouth, while there was paint on them.

"On this diſcovery, all the pernicious implements were taken from him, and by giving, occaſionally, a purging medicine, taking care that he had ſtools regularly, and perſiſting in a proper diet, he ſoon began to mend, and

and in a ſhort ſpace of time recovered his uſual health and vivacity."

If your own obſervations correſpond with theſe remarks, by giving them a place in your collection, the knowledge of them will ſoon be extenſively diffuſed, and thoſe who are liable to ſuffer by theſe accidents will be appriſed of their danger.

Perhaps the following account, which I received from a perſon of good underſtanding, juſt obſervation, and veracity, now living in Cornwall, may not be altogether without its uſe, and ſeems not wholly foreign to this ſubject.

A few years ago, two perſons in the ſame neighbourhood purchaſed between them a hogſhead of cyder, for the uſe of the people they employed in harveſt.

Thoſe in the ſervice of my friend had no complaints, enjoyed their health as uſual.

His

His neighbour's work-people had, moſt of them, ſome degree of the *colica Pictonum*, and divers of them ſeverely.

The cyder was the ſame, and given in like quantities; the people worked in the ſame neighbourhood, and at the ſame ſeaſon.

On inquiring into the cauſe of this ſingular difference, it was found that my acquaintance had always ſent his cyder to the field in a ſmall barrel; and that his neighbour had as conſtantly made uſe of a glazed earthen pitcher for this purpoſe. The cyder was thin and ſharp; the glazing was almoſt diſſolved, and, moſt probably, was the cauſe of the complaints. This inſtance may ſerve as a very uſeful leſſon to many people under the like circumſtances; and to corroborate the evidence reſpecting the noxious effects of lead, already ſubmitted to the Public by Drs. Baker, Percival, and other ſenſible writers.



J. Miller Sculpt.

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I.

SOME ACCOUNT OF THE LATE PETER COLLINSON,

FELLOW OF THE ROYAL SOCIETY, AND OF THE SOCIETY OF ANTIQUARIES, IN LONDON, AND OF THE ROYAL SOCIETIES OF BERLIN & UPSAL.

In a LETTER to a FRIEND*.

* Of this "Account" it ſeems right to obſerve, that the rough ſketch only was the production of Dr. Fothergill's pen, in which ſtate the Doctor implicitly conſigned it to the hands of a near relation of the deceaſed Peter Collinſon, with full permiſſion for ſuch alterations and corrections to be made in it as might be deemed expedient. This was accompliſhed in a liberal and extended ſenſe; at leaſt a third part of the original being omitted, and ſeveral paſſages added, in which the Doctor had no other concern than that of approving the ſame previous to publication. EDITOR.



To * * * *.

I KNOW not, my dear friend, that I ever wiſhed for leiſure, and the talent of Biography, more than at preſent: I could employ both theſe in a manner that would be pleaſing to myſelf, and perhaps at the ſame time uſeful to the public, in placing before it an example worthy of being recorded, becauſe highly worthy of imitation. The ſatisfaction ariſing from the view of a life continually employed in commendable purſuits, and in acts of laſting and extenſive utility, is not a ſmall one; we participate afreſh in every ſocial action of the friend whom we loved whilſt living, and pay that tribute to his name which love and friendſhip demand—a grateful and honourable remembrance.

The juſt eſteem which my honoured Friend Peter Collinſon had acquired, not only among the chief promoters of natural hiſtory, in moſt parts of the world where theſe ſtudies are cultivated, but amongſt men of underſtanding in general in every part of uſeful ſcience, will, I perſuade myſelf, render any apology unneceſſary for attempting to exhibit

ſome account of the life of this very eminent perſon.

Our acquaintance commenced about the year 1740; he was then conſidered amongſt the number of thoſe who were beſt acquainted with botany and natural hiſtory in England; his collection in moſt branches of natural hiſtory was very large, and the ſpecimens well choſen; his botanic garden contained many curious plants, not at that time to be met with in any other; and the number of ſuch kept encreaſing to the laſt period of his life.

I owe much of my intimacy with the ſeveral branches of natural hiſtory to my deceaſed Friend: ſcarcely any thing gave him more pleaſure than to promote an inclination for ſuch ſtudies, ſo far as was conſiſtent with his acquaintances ſituation; for being in buſineſs himſelf, he knew the value of time too well, to endeavour to excite a taſte for ſuch reſearches, where probably it muſt have been gratified at the expence of diſcretion, and of thoſe hours which ought to have been devoted to more neceſſary employment.

The

The family of the Collinſons is of ancient ſtanding in the North: Peter and James were the great-grandſons of Peter Collinſon, who lived on his paternal eſtate called Hugal Hall, or Height of Hugal, near Windermere Lake in the pariſh of Stavely, about ten miles from Kendal in Weſtmoreland. My Friend, whilſt a youth, diſcovered his attachment to natural hiſtory: inſects, and their ſeveral metamorphoſes, employed many of thoſe hours, which at his time of life are moſtly ſpent by others in very different purſuits. Plants likewiſe engaged his attention; he began early to make a collection of dried ſpecimens, and had acceſs to the beſt gardens at that time in the neighbourhood of London.

It was a favourable circumſtance to himſelf, that he was in partnerſhip with his brother James Collinſon, in a buſineſs that did not always require their preſence together. They lived in great harmony, and reciprocally afforded to each other opportunities for their reſpective purſuits. Both, however, had a ſtrong reliſh for horticulture and planting, and both had acquired a juſt conception of rural elegance.

He became early acquainted with the firſt-rate naturaliſts of that age; the Drs. Derham, Woodward, Dale, Lloyd, and, to name all in one, the great Sir Hans Sloane, were amongſt his friends. I firſt ſaw that amazing collection now conſtituting the Britiſh Muſæum, with my deceaſed Friend, in company with the late Sir Charles Wager, who had been a moſt generous and fortunate contributor to that vaſt treaſure of natural curioſities; omitting nothing, in the courſe of his many voyages, that could add to its magnificence, and encouraging the Commanders under him who were ſtationed in different parts of the globe, to procure whatever was rare and valuable in every branch of natural hiſtory. To this he was ſtrongly excited by Peter Collinſon; for whom and his family Sir Charles had a very ſingular eſteem, and continued it to the laſt moments of his life.

Among the great variety of articles which form that ſuperb collection, ſmall was the number of thoſe with whoſe hiſtory my Friend was not well acquainted; he being one of thoſe few who viſited Sir Hans at all times familiarly, and continued ſo to do to the

the lateſt period: their inclinations and purſuits in reſpect to natural hiſtory being the ſame, a firm friendſhip had early been eſtabliſhed between them.

Peter Collinſon was elected a Fellow of the Royal Society on the 12th of December, 1728; and perhaps was one of the moſt diligent and uſeful Members of that reſpectable Body, not only in ſupplying them with many curious obſervations himſelf, but in promoting and preſerving a moſt extenſive correſpondence with learned and ingenious Foreigners, in all countries, and on every uſeful ſubject; ſo that he not only furniſhed many inſtructive hints from his own fund of obſervations, but excited others to contribute largely to the inſtruction and entertainment of the Society.

Beſides his attention to natural hiſtory, he ſuffered nothing uſeful in either art or ſcience to eſcape him; he minuted every ſtriking hint that occurred either in reading or converſation; and from this ſource he derived much information, as there were very few men of learning and ingenuity of all profeſ-

ſions, who were not of his acquaintance at home, and moſt foreigners of eminence in natural hiſtory, or in arts and ſciences, were recommended to his notice and friendſhip.

His diligence and œconomy of time was ſuch, that though he never appeared to be in a hurry, he maintained an extenſive correſpondence with great punctuality; acquainting the learned and ingenious in diſtant parts of the globe with the diſcoveries and improvements in natural hiſtory in this country, and receiving the like information from the moſt eminent perſons in almoſt every other. Amongſt a variety of circumſtances of this kind that might be mentioned, his correſpondences with the ingenious Cadwallader Colden, Eſq. of New-York, and the juſtly celebrated Dr. Franklin of Philadelphia, furniſh inſtances of the benefit reſulting from his attention to all improvements. From the former of theſe Gentlemen many valuable obſervations were received; and the latter communicated his firſt Eſſays on Electricity to my Friend, in a ſeries of letters, which were then publiſhed, and have

have been reprinted in a late edition of the Doctor's ingenious diſcoveries and improvements. Their minds in this reſpect were congenial, ever intent upon promoting public good; the letter ſubjoined is a proof of it *.

* To MICHAEL COLLINSON, Eſq.

DEAR SIR, Craven-ſtreet, Feb. 8, 1770.

UNDERSTANDING that an account of our dear departed Friend Mr. Peter Collinſon is intended to be given to the public, I cannot omit expreſſing my approbation of the deſign, as the characters of good men are exemplary, and often ſtimulate the well-diſpoſed to an imitation, beneficial to mankind, and honourable to themſelves. And as you may be unacquainted with the following inſtances of his zeal and uſefulneſs in promoting knowledge, which fell within my obſervation, I take the liberty of informing you, that in 1730, a Subſcription Library being ſet on foot at Philadelphia, he encouraged the deſign by making ſeveral very valuable preſents to it, and procuring others from his friends: and as the Library Company had a conſiderable ſum ariſing annually, to be laid out in books, and needed a judicious friend in London to tranſact the buſineſs for them, he voluntarily and chearfully undertook that ſervice, and executed it for more than thirty years ſucceſſively; aſſiſting in the choice of books, and taking the whole care of collecting and ſhipping them, without ever charging or accepting any conſideration for his trouble. The ſucceſs of this library (greatly owing to his kind countenance and good advice) encouraged the erecting others in different places on the ſame plan; and it is ſuppoſed there are now upwards of thirty ſubſiſting in the ſeveral colonies, which have contributed greatly to the ſpreading of uſeful knowledge in that part of the world; the books he recommended being all of that kind, and the catalogue of this firſt library being much reſpected and followed by thoſe libraries that ſucceeded.

During the ſame time he tranſmitted to the directors of the library the earlieſt accounts of every new European improve-

Perhaps, in ſome future period, the account he procured of the management of ſheep in Spain, in reſpect to their migrations from the mountains to the plains, and their ſtated returns, publiſhed in the Gentleman's Magazine for May and June, 1764, may not be conſidered among the leaſt of the benefits accruing from his extenſive and inquiſitive correſpondence. When America is better peopled, the mountainous parts more habitable, the plains unloaded of their vaſt foreſts, and cultivated, the fineſt ſheep in the world may poſſibly cover the plains of Carolina, Georgia, and the Floridas in the winter months, and retreat to the mountains as the ſummer heats encreaſe, and dry up the herbage. We are utter ſtrangers to this kind of

ment in agriculture and the arts, and every philoſophical diſcovery: among which, in 1745, he ſent over an account of the new German Experiments in Electricity, together with a glaſs tube, and ſome directions for uſing it, ſo as to repeat thoſe experiments. This was the firſt notice I had of that curious ſubject, which I afterwards proſecuted with ſome diligence, being encouraged by the friendly reception he gave to the letters I wrote to him upon it. Pleaſe to accept this ſmall teſtimony of mine to his memory, for which I ſhall ever have the utmoſt reſpect; and believe me, with ſincere eſteem,

Dear Sir,

Your moſt obedient

Humble ſervant,

B. FRANKLIN.

œco-

œconomy. Probably it might be practiſed even in this Iſland to advantage, with this difference, that the higheſt ground ſhould be choſen for the winter reſidence of theſe animals, proper ſhelter being made for them, and the wetter low lands left for ſummer.

Views of public benefit to this Country, to others, to mankind in general, always ſuggeſted to him uſeful enquiries; and the public are in poſſeſſion of many valuable hints, which from time to time he communicated through the channel of the Gentleman's Magazine * and daily papers, ſometimes with

* The following we believe to be a complete Liſt of Mr. Collinſon's papers inſerted in the Gentleman's Magazine, viz.

1. A liſt of American ſeeds imported in 1751; with ſome inſtructions for their cultivation. Gent. Mag. for Dec. 1751.
2. Some obſervations on the white pine, commonly called the Weymouth pine. Ibid. Nov. 1755.
3. Further obſervations on the Weymouth and other American pines. Ibid. Dec. 1755.
4. Obſervations on the fir-tree. Ibid. Jan. 1756.
5. Remarks on the cultivation of ſome ſpecies of North-American ever-green trees. Ibid. March, 1756.
6. A plan for a laſting peace with the Indians. Ibid. Sept. 1763.
7. Some anecdotes of the life of the late Dr. Stephen Hales. Ibid. 1764.
8. An account of the ſycamore or Eaſtern plane-tree. Ibid. April, 1765.
9. Account of the life of the late Dr. William Stukeley. Ibid. May, 1765.

10. An

his name, or initials, but oftener without any ſignature; being more ſolicitous to do good, than to be ſeen in doing it.

His converſation was chearful, and uſefully entertaining, becauſe it was generally turned to ſome intereſting diſquiſition, or imparting ſome beneficial information. This rendered his acquaintance much deſired by thoſe who had a reliſh for natural hiſtory, or were ſtudious in cultivating rural improvements, and ſecured him the intimate friendſhip of ſome of the moſt eminent perſonages in this kingdom, as diſtinguiſhed by their taſte in planting and horticulture, as by their rank and dignity. With ſome of theſe he frequently ſpent a few days at their ſeats in the neighbourhood of London, imparting many advantageous hints with regard to the improvements they were deſigning: and indeed many of them were ſenſible very few were

10. An account of the introduction of the tea-tree of China, and of the elegantly ſpotted mennil-deer of Bengal, into England. Gent. Mag. Supplement for 1765.

11. Account of the introduction of rice and tar into our American Colonies. Ibid. for June, 1766.

12. Deſcription of the ancient cheſnut-tree at Tortſworth, in Glouceſterſhire. Ibid. July, 1766.

13. Some obſervations on the emigration of ſwallows, &c. EDITOR.

either

either ſo able to adviſe in theſe reſpects, or ſo impartial. Frequent opportunities had furniſhed extenſive obſervation and experience of the effects of different methods of cultivation; what ſoil, what aſpect, beſt ſuited different plants and trees; how beſt to cover incurable defects, how to improve beauties; and from this general knowledge, derived from repeated remarks, he often prevented young planters from committing capital miſtakes, rectified others into which they had been miſled by the ignorant and deſigning; and by ſuch means he prevailed upon many of his friends not only to embark in this rational amuſement, but to perſevere in it, greatly to their own emolument, and the laſting advantage of their country.

A very frequent obſervation of my Friend's was, that he thought it a matter of the utmoſt importance to young people of fortune, that they ſhould be as early as poſſible initiated into ſome rational purſuit, and eſpecially into a taſte for all kinds of rural improvements. The human mind, he would remark, muſt have ſome object in view, ſome amuſements are neceſſary; and if virtue

tue and propriety do not engage it, vice and folly will. Let us then turn them to an employ, which at once contributes to their health, their pleaſure, and their profit, and ſecures them from falling into idleneſs or diſſipation, merely for want of better engagements; let us find them ſomething to do, and they cannot be unhappy, like a multitude of young perſons, who are diſſipated and corrupt, becauſe, perhaps, thoſe who have been early about them, or were concerned in their education, had not the inclination or addreſs to lead them into ſome innocent, pleaſurable, and uſeful purſuit.

Planting, he uſed to ſay, and gardening ſupply a fund of entertainment, the moſt laſting and reaſonable of any occupation in this life; pleaſures not to be purchaſed. The trees which we ourſelves have planted, the fruits we have raiſed, the plants we have cultivated, ſeem to be like our children, a kind of new creation; their ſhade, their taſte, their fragrance, and their beauties, affect us with a richer repaſt than any others. What a pleaſing ſcene, would he obſerve, lies open to a young man of fortune devoted to ſuch amuſe-

amuſements! Each ſucceeding year produces new ſhades, other fruits, freſh beauties, and brings beſides moſt certain profit. To behold the riſing groves, barrenneſs made fertile, our country improved, ourſelves made uſeful and happy, and poſterity enriched! When on this favourite ſubject, a very natural reflection often eſcaped him, that he ſeldom knew a man poſſeſſed of a taſte for ſuch pleaſures, who was not at the ſame time temperate and virtuous. And indeed he had a right to make the obſervation; for he had the ſatisfaction of reckoning among his moſt intimate friends, men of the moſt amiable and unblemiſhed characters in all ſtations, parties, and diſtinctions.

Nor was he only employed in promoting this taſte amongſt his friends, in enlarging their views, correcting and refining their judgement, but alſo in furniſhing them with the means of increaſing their plantations; and it is but doing juſtice to his memory, to mention that he was the firſt who introduced the great variety of ſeeds and ſhrubs, which are now the principal ornaments of

every garden; and that it was owing to his indefatigable induſtry, that ſo many perſons of the firſt diſtinction are now enabled to behold groves tranſplanted from the Weſtern continent flouriſhing ſo luxuriantly in their ſeveral domains, as if they were already become indigenous to Britain.

His buſineſs in the mercantile way was chiefly to North-America and the Weſt-Indies; the former particularly. He had peruſed every performance that was wrote reſpecting the natural hiſtory and produce of all our own ſettlements, and indeed of all the European colonies in the New World. This enabled him to make enquiries after every thing that was curious and uſeful, and brought him acquainted with the moſt intelligent people who came over from America; his enquiries raiſed ſome curioſity in thoſe countries, and excited a taſte for natural hiſtory, and botanical reſearches. It perhaps may ſafely be ſaid, that every thing of this ſort that has appeared in thoſe parts of the world was chiefly owing to his encouragement. That eminent naturaliſt John Bartram

tram may almoſt be ſaid to have been created ſuch by my Friend's aſſiſtance; he firſt recommended the collecting of ſeeds, and afterwards aſſiſted in diſpoſing of them in this country, and conſtantly excited him to perſevere in inveſtigating the plants of America, which he has executed with indefatigable labour through a long courſe of years, and with amazing ſucceſs.

The quantities of new ſeeds he received from America, not only ſupplied his own garden with every thing that was curious, but furniſhed him with the means of procuring others, in exchange, from other parts of the globe. He had ſome correſpondents in almoſt every nation in Europe; ſome in Aſia, and even at Pekin; who all tranſmitted to him the moſt valuable ſeeds they could collect, in return for the treaſures of America. In this exchange of good offices, there is abundant cauſe to believe no man ever exceeded him in reſpect to punctuality, care, or generoſity; few had ever more intelligent correſpondents, or ſucceeded better in enriching this country with the vegetable produce

produce of every other, that could either add to its advantage or ornament. And were I to aſſert, that he was the means of introducing more new and beautiful plants into Britain than any man of his time, and was inferior to none in his acquaintance with the hiſtory of their introduction, I ſhould run little hazard of tranſgreſſing the bounds of veracity.

Many anecdotes of this kind he had learned from the ancient botaniſts, who flouriſhed at his entrance into theſe ſtudies; and many obſervations he had likewiſe made in the courſe of above half a century. Were ſuch of the former of theſe as he noted in moſt of the books of natural hiſtory which he left behind him, collected, and the many curious remarks he made on a variety of improving and entertaining ſubjects, digeſted and laid before the public, a richer treaſure of valuable knowledge can ſcarcely be offered to it, eſpecially if judicious extracts were added from the letters of his correſpondents.

The

The great Linnæus, at the time of his reſidence in England, contracted an intimate friendſhip with Peter Collinſon; which was reciprocally increaſed by a multitude of good offices, and continued to the laſt without any diminution.

It was not, however, to Britain only that his benevolent views were confined: as he took much pains to excite a taſte in the Americans for natural hiſtory, ſo he likewiſe often prompted them to purſue improvements, alike beneficial to themſelves and to their mother country. How often have I heard him urge to ſuch of them as viſited him, the benefit, nay neceſſity, of cultivating flax, hemp, wine, ſilk, and other products! He would preſs the Virginians to bethink themſelves in time of a more permanent ſtaple than a plant whoſe conſumption only depends on cuſtom and caprice, and this cuſtom daily declining. Vines, ſaid he, will thrive well in your country; but imitate nature in their cultivation; don't keep them cloſe to the ground, as we are forced to do in this and other

Northern European climates, for the ſake of a little more ſun and heat to ripen the grape; your ſummer heats exceed, as much as ours fall ſhort; allow them, therefore, longer ſtems; let them be trained to, and ſupported by trees, and hide their fruit among the foliage, as in the warmer parts of Europe.

We frequently lamented the ſupineneſs and inattention of the Coloniſts to their intereſt in this, as well as many other articles. In moſt of the Northern and Southern Colonies there are a variety of native grapes, growing wild in the woods, and twining among the trees and buſhes for their ſupport; theſe yield fruit in plenty of different kinds, and many of them capable of producing a rich good wine; how eaſy would it be in autumn to collect a ſufficient quantity of the fruit to make trial of the wine! It has been done by a very few, and with ſucceſs; the fault ſeems not ſo much in the fruit, as want of ſkill or care in making the wine. I have taſted ſome very good wine from the wild uncultivated grape, made without much ſkill,

ſkill, and ſent over to England; what would not the ſame fruit, with proper ſkill and management, have produced? It is certainly high time for the Americans to apply themſelves with a little more diligence to cultivate their native produce. No perſon perhaps was more intently ſolicitous than my Friend to promote theſe uſeful eſſays, as no perſon was better acquainted with the natural produce of America; none ſaw the benefits that might reſult from them more clearly, nor could ſuggeſt more compendious and unexpenſive means of procuring them.

Beſides his attachment to natural hiſtory, he was very converſant in the antiquities of our own country; many curious remarks, as well as ſome ancient Britiſh curioſities, are in the poſſeſſion of his ſon. Few perſons were better acquainted with the progreſs of arts, ſciences, and manufactures, or improvements of any kind, amongſt us, than himſelf. The ancient ſtate, and its gradual advances to the preſent, was a frequent topic of his enquiry and converſation.

He was a member of the Society of Antiquarians from its firſt inſtitution, and ſupplied them often with many curious articles of intelligence and obſervations, reſpecting both our own and other countries; for wherever he was, or however ſeemingly engaged, nothing at any time eſcaped his notice, if it appeared likely to be uſeful or inſtructive. Why he was not elected one of the Curators of the Britiſh Muſeum, was matter of wonder to many of his acquaintance. He was one of the founder's moſt antient and intimate friends, a contributor to this collection, acquainted with the ſubjects, and had done more towards promoting reſearches into natural hiſtory than perhaps moſt of his cotemporaries: but he had no greater ambition than to collect what knowledge he could, and to render this knowledge ſubſervient as much as poſſible to the good of mankind.

He lived many years in great domeſtic happineſs; his family took the ſame bias, and aided his purſuits. Like his own, it was alſo their amuſement; and being accuſtomed

tomed to the converſation of men acquainted with ſuch ſubjects, they acquired both knowledge and an attachment to the ſtudy of nature.

His perſon was rather ſhort than tall; he had a pleaſing and ſocial aſpect; of a temper open and communicative, capable of feeling for diſtreſs, and ready to relieve and ſympathiſe. He roſe very early, and whilſt in the country his time was almoſt continually employed in his garden, obſerving and aſſiſting the operations of nature, or in the ſtudy of other parts of phyſical knowledge, which contributed to his health and his pleaſure.

He was fond of fruit to an extreme, and of flowers a perpetual admirer; he was ſeldom without them in his houſe, from the early Snowdrop to the autumn Cyclamen. He would often relate with pleaſure the aſtoniſhing advancement made in his time in horticulture; gave inſtances of many plants, which at their firſt introduction would not bear our winters without ſhelter,

and now endured almoſt our hardeſt froſts; ſo that foreigners ſtood amazed at the power of vegetation in this country, and the happy temperature we enjoy, notwithſtanding the unmerited murmurs of the unthinking and injudicious againſt a climate the moſt favourable of all others to the real happineſs of mankind.

Excepting ſome attacks of the gout, in general he enjoyed perfect health and great equality of ſpirits; bearing thoſe trials which are incident to man with fortitude and reſignation.

In ſuch a courſe he arrived at his 75th year; when being on a viſit to Lord Petre in Eſſex, for whom he had a ſingular regard, he was ſeized with a total ſuppreſſion of urine, which baffling every attempt to relieve it, proved fatal on the 11th of Auguſt, 1768, and deprived his family, his friends, and country of a man devoted to their intereſt and advantage. Incloſed in his will was found a paper, importing, "that he hoped he ſhould "leave behind him a Good Name, which he "valued more than riches; that he had en-

"deavoured not to live uſeleſsly; and that "all his days he conſtantly aimed to be a "Friend to Mankind." Such indeed he was, to the utmoſt of his ability; and he may juſtly be conſidered as a latent ſpring to many important improvements, as well as one of the principal promoters of natural hiſtory in general, and of horticulture in particular, in the age in which he lived.

He has left behind him, beſides many curious anecdotes relative to the ſtate of botany, planting, and horticulture in this country, a vaſt treaſure of dried ſpecimens of plants; and in ſpite of repeated and moſt cruel depredations made upon his garden, whereby he loſt a multitude of valuable and curious plants and ſhrubs, and had beſides very many others deſtroyed by the villains in the act of plunder, he nevertheleſs left a ſmall treaſure of rare plants in greater perfection perhaps than can be ſeen in any other ſpot.

That which I am now, though feebly, attempting to do for him, he often executed for his friends, reſcued their names from

oblivion, and propoſed their virtues to be copied by ſucceeding generations. The late Dr. STUKELEY was one; and many others might be mentioned, who have received from his friendly hand the tribute due to their memories.

His friendſhips were not ſuperficial; he could not ſee a worthy character drop unheeded into the grave without a wiſh, nay, an endeavour, to perpetuate its remembrance. For my own part, I yet feel that in him I have loſt a Friend who valued my happineſs little leſs than his own, and ſincerely wiſh it was in my power to do juſtice to his memory. Till, however, ſome perſon of greater ability and more leiſure undertakes the taſk, I believe his friends will not be diſſatisfied with peruſing this account of his conduct and converſation.

II.

AN

ESSAY

ON THE

CHARACTER

OF THE LATE

ALEXANDER RUSSELL, M.D. F.R.S.

READ BEFORE THE

SOCIETY OF PHYSICIANS,

The 2d of October, 1769.

ADVERTISEMENT.

A Few years ago it was reported, that the College of Phyſicians in London had it under conſideration to admit perſons deſirous of practiſing phyſic as Licentiates, upon an examination in Engliſh.

This was done, as it was ſuppoſed, to introduce into this rank men of little or no education, in order to depreciate the characters of many who were in ſome eſteem with the public.

An attempt of this nature could not but alarm thoſe who were immediately to be affected by it, and who felt the deſigned indignity.

Several of theſe met together, compared the accounts they had received, and found there was too much truth in the reports, to ſuffer them any longer to remain inattentive to deſigns ſo prejudicial.

It was reſolved to call the Licentiates in general together, to acquaint them with their ſituation, and to act in concert for their general ſafety.

But this was not all; thoſe who embarked in this affair, had at heart not only the honour of their profeſſion, but its public utility; not only to emancipate themſelves from an

authority,

authority, which appeared to them in the light of uſurpation, but to eſtabliſh the faculty upon a ſolid and liberal foundation.

How far their endeavours may ſucceed, is uncertain. But of one thing they are ſure; they promote harmony amongſt themſelves; excite to an honourable emulation; and, whatever may be their fate, will give proofs by the rectitude of their conduct, and an exertion of their abilities, that they are not unworthy of the higheſt honours in their profeſſion.

Philanthropy is inſeparable from good minds. This led them very early to reſolve, that honourable mention ſhould be made of their colleagues after their deceaſe. It has fallen to my lot, by appointment of the ſociety, to perform this office. If my abilities had been equal to my friendſhip for the deceaſed, or to his deſert, the reader would have received much ſatisfaction in peruſing the following pages.

GEN-

GENTLEMEN,

WHEN it was firſt propoſed in this Aſſembly, to preſerve the memory of ſuch of our aſſociates, as had deſerved well of the public, and thereby done honour to the community of which we are members, I little expected it would have fallen to my lot, ſo ſoon to have performed this mournful office for one, who in reſpect of vigour of conſtitution, temperance, and juſt management of his health, was inferior to none, ſuperior to moſt amongſt us.

Accuſtomed as we are to ſee the ravages of that hand, which removes the generations of men, ſtrong and weak, rich and poor, the ignorant and the wiſe, like the herbage that falls promiſcuouſly before the ſcythe, not one could refrain the unaffected ſigh, ſcarcely the tear, when it was known that our RUSSELL was no more! The tender remembrance of friendſhip yet lives in every breaſt; we mourn without form; we

ſee and feel the void his fall has left, and which only time can mitigate, and a reſignation to the diſpenſations of that Power which orders all things with unerring Wiſdom, and Goodneſs beyond our comprehenſion.

Unpractiſed in the language of Eulogy, and unequal to the charge you have committed to me, allow me to beſpeak your utmoſt candour and condeſcenſion, and think him not unworthy of your indulgence, who, in obedience to your commands, attempts to place before you, tho' in an imperfect manner, the idea of the companion you deplore.

We wiſh to know the moſt minute particulars in the lives of thoſe, when they are removed, who have become dear to us, either from a ſimilitude of manners, ſimilar ſtudies, a long and mutual intercourſe of friendſhip, or any other of thoſe ſtrong connections that tend to cement individuals together in ſociety. In infancy, almoſt in the period of youth and adoleſcence, many traits are often obſerv-

obſervable, that ſtrongly mark the future character of the man. The relation of incidents, of no conſequence in themſelves, viewed in this light, affords us ſatisfaction, when we recollect them as the early preſages of future worth: my acquaintance with our colleague having commenced at a later period, prevents any narrative of this kind. I have learned, however, that modeſty, diligence, and propriety of conduct, accompanied him from early infancy; beloved by his intimates, eſteemed by his friends, ſeldom making an enemy, never loſing a friend, by his own miſconduct.

He was early devoted to medicine by his father *; a perſon of great eminence as a lawyer in the city of Edinburgh, and ſingularly happy in having ſeven of his ſons that

* The conciſeneſs of the author reſpecting the character of the Doctor's father, in all probability, aroſe from an apprehenſion of endangering his own credit, or at leaſt of ſubjecting himſelf to the imputation of credulity, had he further enlarged upon it.

For how few would believe, that a moſt fond indulgent father could, in his own houſe, manage a very numerous family of children, all boys, and bring up ſeven of them to man's eſtate, without ever giving a blow, or even uſing a harſh expreſſion; and yet preſerved a more perfect obedience in

lived to be men; not one of whom, by miſbehaving, ever gave him cauſe of a moment's diſquietude; but, on the contrary, by the juſt reputation they acquired, made all good men rejoice that he had ſuch a family, and ſo eminently diſtinguiſhed by ſo many good qualities.

Our colleague, after having gone through his grammatical ſtudies with reputation in the high ſchool at Edinburgh, and ſpent two years after this in the Univerſity, was placed with his uncle, who was then one of the moſt eminent practitioners in the city, in order to acquire the knowledge of the firſt rudiments of medicine. In the years 1732, 3, and 4, he continued his medical ſtudies under the profeſſors, who at that time ſo ably filled the ſeveral chairs of phyſic in the Univerſity of Edinburgh, and laid

in them, than can be produced by any bodily pain? Such education is liberal, in the trueſt ſenſe of the word.

This worthy man, though he lived to the age of 86, was to the laſt attended, whenever he pleaſed (which was almoſt all day long) with chearful company of both ſexes, and of all ages; retained his faculties and amiable temper, was never angry, and preſerved his chearfulneſs and ſpirits to the laſt.

the

the foundation of that character which ranks it in the public eſteem ſuperior to moſt others in Europe.

Though there had long been profeſſorſhips for medicine in that place, and ſeveral attempts had been made to introduce a general courſe of medical inſtruction, it was not till about the year 1720, that this univerſity diſtinguiſhed itſelf. Several gentlemen, who had ſtudied under Boerhaave, with a view to revive the ſtudy of medicine in their native country, where it had formerly flouriſhed, qualified themſelves for the purpoſe of giving courſes of public lectures on every branch of their profeſſion. The celebrated Monro taught anatomy, after having ſtudied it for ſeveral years under the ableſt maſters then in Europe *. The *theory* of phyſic was aſſigned to the amiable, the humane Dr. Sinclair; Drs. Rutherford and Innes choſe the *practice*; *chemiſtry* was allotted to Dr. Plummer, and the teaching the *materia medica*, together with *botany*, (of which laſt

* Dr. Douglaſs of London, Albinus, the elder, of Leyden, and Winſlow at Paris.

he was appointed King's profeſſor) devolved upon the learned and indefatigable Alſton. The city of Edinburgh favoured the generous deſign, added to the ſalaries allotted from the crown, and provided as ſuitable conveniencies as the place would at that time afford.

They had no ſooner opened their reſpective profeſſorſhips, than many ſtudents of their own nation, ſome from England, from Ireland, and not long after from the Plantations likewiſe, flocked thither. This ſtimulated the profeſſors to exert their great talents with the utmoſt energy; profeſſor Monro's claſs ſoon became numerous; and the anatomy of the bones, of the nerves, and his other pieces, will long remain as teſtimonies of his great abilities, when the grateful regard of the multitude of thoſe who ſtudied under him, and were witneſſes of his ſingular attention to inſtruct and encourage his pupils, as well as to act the part of a parent to every ſtranger, fails of expreſſion. With what grace and elegance, with what minuteneſs and preciſion, would the

the humane, the inimitable Sinclair explain the inſtitutes of the maſter, whoſe nervous ſimplicity he ſtudied to exemplify, tho' not with ſervile imitation? Where he differed in opinion from that great man, with what diffidence would he offer his own? Ever the ſtudent's friend, and their example, in a noble ſimplicity of manners, and a conduct becoming the gentleman and the phyſician.

Doctor Rutherford ſtill enjoys his country's praiſe, and the laſting eſteem of all his pupils. Plummer is no more! He knew chemiſtry well. Laborious, attentive, and exact, had not a native diffidence veil'd his talents as a prælector, he would have been among the foremoſt in the pupils eſteem: ſuch was the gentleneſs of his nature, ſuch his univerſal knowledge, that in any diſputed point of ſcience, the great Maclaurin always appealed to him, as to a living library; and yet ſo great his modeſty, that he ſpoke to young audiences, upon a ſubject he was perfectly maſter of, not without heſitation.

Alſton, the laborious Alſton, will live for ages. What benefit his pupils had the means of reaping, will beſt be known when his Lectures, now in the preſs, are publiſhed *. What care to ſeparate truth from falſhood! how cautious in advancing ſpeculation! how laborious in experiment, and chaſte in forming his concluſions! The numerous M. S. copies, that were taken by his pupils, of his lectures are ſufficient proofs of their opinion of his abilities.

But while I am thus attempting to pay my tribute of gratitude to the memories of thoſe eminent profeſſors, who laid the foundation of that ſeminary of phyſic, whoſe reputation has ſince drawn ſtudents from every nation in Europe, let me not forget the learned, the able, the laborious Innes. Tho' I was not ſo happy as to be of the number of his pupils, yet I can well remember the deep regret expreſſed by many of the ſtudents, my contemporaries, for his early and untimely fate. Often have I heard

* Theſe Lectures are ſince publiſhed.

them

them tell, with what dignity, with what clearneſs and preciſion, in what a nervous maſculine ſtile, he uſed to explain the Aphoriſms of his great maſter. His colleagues, too, moſt deeply lamented the loſs which they and the public ſuſtained by the death of ſo able a coadjutor; they regretted the Man whom they loved, the Phyſician and Profeſſor whom they eſteemed.

Under ſuch maſters, and at a time when they were daily riſing into reputation, Dr. Ruſſell ſtudied, embracing every means of qualifying himſelf for the duties of his ſtation.

Several ſtudents at that time, the foremoſt in application and in knowledge, fired by the example of their maſters, who had nothing more at heart than the improvement of thoſe who committed themſelves to their tuition, formed a Society for their mutual inſtruction and advancement in their ſtudies. Every ſtudent of a certain ſtanding, who diſtinguiſhed himſelf by his diligence, capacity, and conduct, was initiated into this

little Aſſembly. Here the opinions of the Antients, of their Contemporaries, nay the Doctrines of their Maſters, were frequently diſcuſſed; and two of the members were always charged with the taſk of providing inſtruction and entertainment for the next meeting of the Society. Queſtions, no doubt, were here diſputed and decided, which long experience would have declined. But it exerciſed their faculties, gave them both ſides of arguments, taught them to doubt, and habituated them to obſervation.

Our colleague was one of the firſt members of this aſſociation, inſtituted in the autumn of the year 1734, together with the eminent Doctor Cuming of Dorcheſter, the ſagacious Cleghorn, lecturer in anatomy at Dublin, with a few others, who, though now removed, did honour in their ſtations to this inſtitution, which not only ſubſiſts, but has yearly increaſed in vigour, and is honoured with the immediate patronage of the Profeſſors. In a Theſis, not long ſince dedicated to this Society by a very ingenious

nious member *, as well as from the teſtimony of another gentleman, who had been admitted into it, the ſingular advantages

* Dr. Morgan of Philadelphia dedicates his Theſis, publiſhed when he took his degree in the year 1763,

" Societati Medicinæ Studioſorum in Academia Edin-
" burgena dudum inſtitutæ:"

In which he beſtows, among others, the following panegyrick. " Quippe qui recolam quanto cum judicio, ordine
" et decore res veſtræ gerantur; quanta ſint in veſtris ratio-
" ciniis et ſententiis, tum libertas et candor, tum etiam nam
" expertus refero, æquus et humanus favor, ita ut ſaluber-
" rimo hoc veſtro inſtituto, quo non niſi utiliſſimæ quæſtio-
" nes diſcutiuntur, omnia conſpirant ad ſcientiæ medicæ
" ſtudium cum fructu et emolumento promovendum, &c."

In Dr. Garland's Inaugural Diſſertation, " De medica-
" mentis adſtringentibus," publiſhed alſo in 1763, is the following account of it:

" Nec juvenum coetûs qui medicinæ ratione excolendæ
" cauſâ, ſeptimo quoque die, inter ſe in noſocomio regio con-
" veniunt, ac quorum ego in numero per triennii ſpatium
" fui, deceſſurus, non mentionem non facere potui.—Cele-
" berrimis academiæ ſcholis, hæc quaſi alia ſuccedit.—Is
" certe locus eſt, ubi audita a doctoribus, e libris petita,
" undecunque accepta ad medicinam pertinens diſciplina,
" in medium prolata, ac ultro, citroque in contrarias partes
" diſputando agitata, altius in omnium animos influit: ubi
" juventutis ſtudia gloria incenduntur, exercitatione acuun-
" tur, animique ad multiplicis ac ſpinoſæ ſcientiæ quærendæ
" laborem perferendum, propoſitis ex ſuorum numero exem-
" plis pulcherrimis, perpelluntur, poſtremo, ubi omnes in-
" ter ſe mutuæ amicitiæ firmiſſimum nectit vinculum Flo-
" ruit triginta prope annos his juvenilis circulus, et ut æter-
" num floreat precor!"

Soon after its firſt inſtitution, the writer of this Memorial was likewiſe a member, and knows from experience the benefits reſulting from it.

that reſult from this aſſociation, are deſcribed in a manner that delineates the character of the ſtudents in that univerſity, and does honour to the firſt founders of the inſtitution.

Having finiſhed his ſtudies in the univerſity, though without applying for a degree at that time, he came to this city in the year 1735, and ſoon after went to Turkey, and ſettled about the year 1740 at Aleppo, in the practice of phyſic.

The Engliſh Factory at that place has frequently been conſtituted of men of property and extenſive knowledge; they were ſuch when Doctor Ruſſell fixed there, at the unanimous requeſt of the gentlemen of the Factory. We have no account of any of his predeceſſors being remarkably eminent in the practice of phyſic: to take care of the Factory ſeems to have been the extent of their views.

Doctor Ruſſell applied himſelf aſſiduouſly to gain a knowledge of the Language of the

country, and to become acquainted with the ableſt of the numerous practitioners in the place, who were employed among the inhabitants. He ſucceeded in both; he ſoon diſcovered the incapacity of theſe; a few traditional receipts compoſed the whole furniture of moſt of them; he found a few, however, capable of information, and aſſiſted them to the utmoſt of his power.

He was ſoon applied to by the inhabitants of Aleppo, of all ranks and profeſſions; Franks, Greeks, Armenians, Maronites, Jews, &c. and even by the Turks themſelves: in this inſtance they forgot that he was an unbeliever, remitted of their uſual contempt for ſtrangers, and not only beheld him with reſpect, but courted his friendſhip, and placed unlimited confidence in his opinion. The Paſcha himſelf became acquainted with the merit of our deceaſed colleague, conſulted him, called him his Friend, found him upright, ſenſible, and ſincere; as a man, polite without flattery, decent, but not ſervile; as a chriſtian, true to his principles, diſintereſted and generous as a Briton;

Briton; and in point of ſkill as a phyſician, ſuperior to every one. A natural, even, cool and conſiſtent temper, a freedom of behaviour as remote from confidence as conſtraint, improved by reading and converſation; a mind imbued with juſt reverence to God, and impreſſed with a ſenſe of the duty we owe; an underſtanding fraught with the principles of the profeſſion to which he had been early devoted (the practice of phyſic) happily blended with great benevolence, was a character ſeldom to be met with in the Aſiatick regions: this, however, was the character of our colleague; and I appeal to you, my aſſociates, for the juſtice of the portrait.

The Factory thought themſelves happy in ſuch a phyſician, ſuch a companion, ſuch a countryman. His cloſe and intimate connexion with the Paſcha enabled him to render to the Factory the moſt important ſervices; and indeed all the European nations trading at that place, were repeatedly obliged to his interpoſition, on a multitude of occaſions.

Seldom

Seldom would the Paſcha determine any intricate affair, reſpecting not only commerce, but even the interior Police of his government, without firſt conſulting his Phyſician and his Friend; and as ſeldom deviated from the opinion he propoſed: and ſuch was the Paſcha's reſpect for ſo rare a character, and ſuch his friendſhip and determined reſolution to do him honour, that he even choſe to oblige the People in the Doctor's Preſence, and ſeldom puniſhed any criminal but in the Doctor's Abſence; that the people might learn to think it was owing to the Doctor's interpoſition, that examples of ſeverity were not more frequently inflicted *.

Many princely preſents were the conſequence of this eſteem: the Paſcha did not

* With regard to criminals, this behaviour of the Paſcha was very remarkable and polite; for when mitigating circumſtances occurred in favour of criminals, to induce the Paſcha to ſpare them, he often diſmiſſed them, with a caution to behave better in time to come; for they were ſo bad, that none of their own countrymen durſt ſpeak to them; but that they owed their lives to the Engliſh Doctor: tho' he ſometimes before had retired, to make way for the neceſſary ſeverities of juſtice, and knew nothing of the matter till the poor unhappy wretches came to his houſe, to fling themſelves at

even forget the Doctor's Father, *to whom*, ſaid he, *I am obliged for your aſſiſtance.* He ordered preſents to be ſent to the worthy old man: what joy muſt this excite in an aged parent's heart, to have ſuch authentic proofs of the merit of his ſon from ſo diſtant a clime, and where the merit muſt be great to gain ſuch a teſtimony!—I leave the HISTORY OF ALEPPO to ſpeak its author's abilities.—It has been already tranſlated into

at his feet, and with true gratitude thank him for their lives; and indeed ſometimes the Paſcha went ſo far as to tell the criminals, that, in his opinion, they certainly deſerved Death, but that he durſt not order it, for the Engliſh Doctor inſiſted on Mercy. It is rare to find any ruler making ſo great a ſacrifice of his popularity to a Stranger, or in ſo polite a manner to transfer it to any body.—Beſides this Paſcha, who ruled a long time, the others that came after him had the greateſt confidence in the Doctor, and intimacy with him; particularly one Paſcha of this place, an old man, who had ruled the Empire as Grand Vizir, and died at Aleppo, intruſted him with the whole ſecrets of his family, and depended on his advice.

The Doctor's fame was perhaps more general over the Turkiſh Empire, than any phyſician's is in Europe; well known at court, and in every province, he eſcaped more than once the diſagreeable circumſtance of being ſent for to the Grand Signor in time of the Plague. His brother was, in moſt of the trading towns in Turkey, found out, by bearing the ſame name, and offered great civilities; and once at Conſtantinople, when a ſlight Plague happened there, was oppreſſed with invitations to viſit ſeveral great men, which with difficulty he avoided. W. R.

other

other languages, and it will be juſtly eſteemed one of the moſt important productions in medicine, ſhould ever that fatal ſcourge, the Plague, be permitted to come amongſt us.

You, gentlemen, are not ignorant of its worth; and to ſay more on this ſubject, would be detracting as much from your underſtandings, as from your friendſhip.

Suffer me, however, to recount one circumſtance, which may not perhaps be of ſuch general notoriety.

From his thorough knowledge of the Peſtilence, and the means ſucceſsfully made uſe of to prevent infection, in the countries moſt expoſed to this fatal diſeaſe, he formed a deſign of exciting the greateſt commercial nation in the world to provide ſome more effectual means than hitherto it had done, in order to prevent it from again becoming the dreadful theatre of peſtilential contagion.---With this view, in his return from Turkey, he viſited the moſt famous Lazarettos, to which he could have acceſs, inquired

inquired into their ſtructure, the government they were under, and took an account of all the precautions they uſed for preſervation.

At Naples, Leghorn, and other places, he had all the opportunities of obſervation he could wiſh for; and profited by them to ſuch a degree, as to be better acquainted with the conduct of the wiſeſt ſtates, in reſpect to the means of prevention, than perhaps any other perſon: indeed his acquaintance with this ſubject, and his experience, induced him to make himſelf maſter of every thing appertaining to preſervation from one of the greateſt of all human calamities.

And ſo generally was his great knowledge of this diſtemper eſtabliſhed, that in the latter end of the year 1757, when our miniſtry was alarmed with a report of its being broke out at Liſbon, and earneſtly ſolicitous to take every precaution to prevent its being imported into this kingdom, they thought no perſon ſo fit to be conſulted on the means proper to be purſued, as our worthy

colleague.

colleague. Doctor Ruſſell received his orders to attend the Privy Council; he came, and gave ſuch pertinent and ſatisfactory anſwers to the queſtions propoſed, that he was deſired to communicate his information, and the method he propoſed to prevent the ſpreading of that calamity, in writing. This he accordingly did; and ſhould it pleaſe the Almighty hereafter to threaten this nation with that dreadful ſcourge, the proſecution of the plans then ſuggeſted, may perhaps greatly contribute to avert from us the moſt terrible of all diſeaſes.

From the time he left England, to his return in February 1755, we had maintained a regular correſpondence. I could not forbear mentioning to him repeatedly, how acceptable a more accurate account of Aleppo would be to this nation, and to all Europe; that no perſon would probably ever ſtand a chance of ſucceeding in it ſo happily as himſelf; that his long reſidence there, his knowledge of the language, the manners, cuſtoms, diſeaſes of the place, the great credit he had acquired amongſt all ranks,

ranks, by an able, diligent, and diſintereſted exertion of his faculties amongſt them, his influence over the Paſcha, and the reſpect paid him by the Turks themſelves, would facilitate every enquiry. He viewed the propoſal in the ſame light, collected materials, made ſuitable enquiries, and has erected a laſting and honourable monument to his memory.

With no ſmall trouble he ſucceeded in procuring us the ſeeds of the *true ſcammony*. They were raiſed by my two botanical friends, the late Peter Collinſon, and the indefatigable James Gordon. Seeds were likewiſe ſent over to the ſouthern colonies of America, in hopes that in a ſimilar ſoil and latitude, in ſome future time, we might from thence have this valuable drug unadulterated *.

* The late Conſul Sherrard, who reſided long at Aleppo, and was one of the moſt eminent botaniſts of his time, endeavoured long and fruitleſsly to obtain the ſeeds of this and ſome other curious plants. The Arabs, who are the people chiefly employed in theſe affairs, not ſo much thro' ignorance as knaviſhneſs, will bring every kind of ſeed but the right, and aſſert that it is the ſeed required. Dr. Ruſſell aſſured me, that he had near 20 different ſeeds brought to him for the

To him, likewiſe, we are indebted for a plant, that will hereafter be one of the greateſt ornaments of our gardens *; as well as for many uſeful intimations, both in reſpect to his own profeſſion, as to commerce in general.

He choſe this city for his reſidence at his return to England, and ſoon had a conſiderable ſhare of employment. A vacancy happening in St. Thomas's Hoſpital, about the beginning of the year 1759, he was choſen phyſician, and continued in this ſtation to

the ſeeds of the true Scammony, by different perſons employed to procure it him, with promiſes of a ſuitable reward. Amongſt theſe found, there were two parcels of ſeeds alike, which correſponding to the general character, he judged were the right; and theſe he ſent over to England. Many plants were raiſed from them, and ſome are yet in the gardens of a few botaniſts in the neighbourhood of London. We have not received an account of their propagation in America; but if the plant is kept alive in this country, it will probably be ſent thither under ſome perſon more attentive to the public benefit than his predeceſſors.

Dr. Ruſſell publiſhed an exact deſcription of the Scammony, and the method of collecting its juice, in the firſt volume of the Medical Obſervations.

* The *Andrachne*, nearly approaching to the *Arbutus*, which it ſurpaſſes in elegance. An exact deſcription of this plant was given in the Tranſactions, by that great botaniſt and excellent painter, the late G. D. Ehret.

the time of his death, an example of diligence and humanity to the ſick, of great medical abilities as a phyſician, and as a gentleman irreproachable. The Royal Society, of which he was many years a worthy member, the Medical Society †, likewiſe, who early admitted him amongſt them, are obliged to Dr. Ruſſell, and the Public through them, for many valuable communications: his extenſive practice at Aleppo, his early introduction into buſineſs here, after his arrival, the multitude of objects under his care in the hoſpital, ſupplied a fund of medical experience, which might have yielded much benefit to ſociety, had his life been protracted.

Need I recite how much this Society is indebted to his vigilance and activity? Perhaps it is in a great meaſure owing to him that it exiſts.

† *Medical Society.* About the year 1752, ſeveral phyſicians in London, chiefly of thoſe called Licentiates, agreed to form themſelves into a ſociety, for collecting and publiſhing all ſuch obſervations and enquiries in medicine, that ſeemed to deſerve the public notice. This Society has ſubſiſted ever ſince, has publiſhed ſeveral volumes, which have been well received, and will be followed by others.

Conſcious of an uniform endeavour to promote the happineſs of all to the utmoſt of his abilities in every ſtation of life; accuſtomed to be treated with a degree of reſpect, which talents like his, ſo uniformly exerted in the promotion of every thing praiſe-worthy, had a right to expect; he could not eaſily brook the ſupercilioufneſs of men, who were weak enough to ſuppoſe, that neither ſenſe nor learning, ſkill nor experience, were the produce of any other clime than that within the narrow limits of which they themſelves had been confined.

Impatient of indignities he had not deſerved, and ſatisfied that yet greater were intended to others in a like ſituation with himſelf, with a view to erect a reputation upon other men's foundations, he communicated his ſentiments to others, who had the like apprehenſions; and common danger has happily been the means of cementing a permanent reciprocal regard, and forming a regular Society of Men, ſcarce known to each other but by name, but whoſe views are alike, Self-preſervation; and whoſe ta-

lents for promoting the honour of the art they profeſs, and the benefit of their fellow-citizens, have acquired ſignal marks of royal and public approbation.

If then to him, with very few coadjutors, is owing the exiſtence of this Society; if the eſtabliſhment of it has contributed to ſecure no ſmall part of the faculty of phyſic in this city from injury and oppreſſion; if it ſhould be the means of eſtabliſhing the whole on a juſt and liberal foundation; if by it harmony and good intelligence have been promoted among individuals, whoſe duty and intereſt, now their inclination likewiſe, leads them to be united; our grateful acknowledgements are moſt certainly due to that man, who laboured moſt aſſiduouſly to promote theſe advantages; and to his memory let us pay a grateful tribute for his unwearied endeavours to ſerve the community, and the important ſervices he rendered it to the lateſt period of his life.

For my own part, when I recollect what I have loſt in him, the ſenſible, firm, and upright friend, the able, honeſt, and experienced phyſician, the pleaſing inſtructive companion

companion of a ſocial hour, expreſſion fails me.

Should this Account ever paſs beyond the circle of Dr. Ruſſell's perſonal acquaintance, perhaps it would be to them ſome gratification to know, that he was in reſpect of ſtature rather tall than middling, well made, of a freſh ſanguine complexion, grave in his deportment, chearful in converſation, active in the buſineſs of his profeſſion, and ſagacious; an attentive and diligent obſerver, clear in his intentions, manly in his preſcriptions, and in his conduct to the ſick, benevolent and diſcreet.

Animated by his example, let us purſue the arduous track of public virtue; and having, like him, ſupported the dignity of our profeſſion, by dealing with a liberal hand to all, the bleſſings of health, to the utmoſt of our abilities, and done honour to our ſpecies, by the conſtant exerciſe of uprightneſs, candour, and benignity, we may cloſe the ſcene, in full poſſeſſion of all that deſerves the name of human felicity.

F I N I S.

